

NO. 4

Textile

APRIL • 1957

bulletin

A report on the A.C.M.I. convention 63
More textile machinery firms for the South 66
A systematic inspection schedule for Draper E Model looms 78

Sectional INDEX

The Textile Industry's Use	30
The Mill Shelf	46
Using The Textile Industry	50
Shipping	52
Materials	56
Textile Industry	58
Spinning, Picking, & Spinning	73
Preparation	78
Spinning, Dyeing	83
Finance, Engineering, & Handling	88
General News	95
News	101
Special Advertising	119

Complementing each other

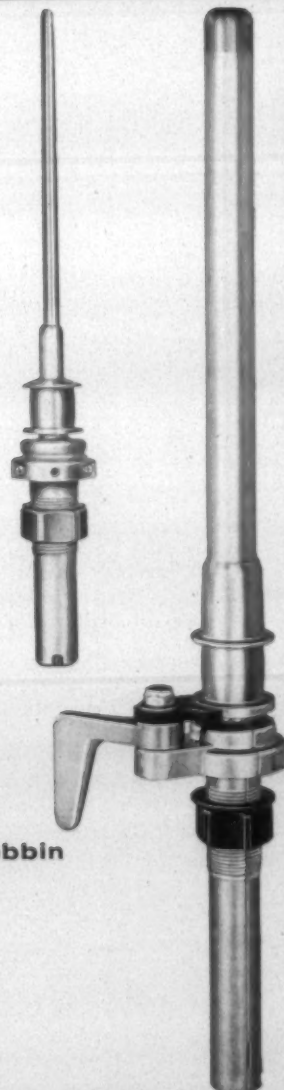
HARTFORD



● Auto-latch Bobbin Hangers for easier creeling

● Ball Bearing Filling Spindles: Top Drive & Acorn Drive

● Ball Bearing Warp Spindles - for Paper Tube or Wood Bobbin



Pre-lubricated ball bearings . . .

5 years, no lubrication

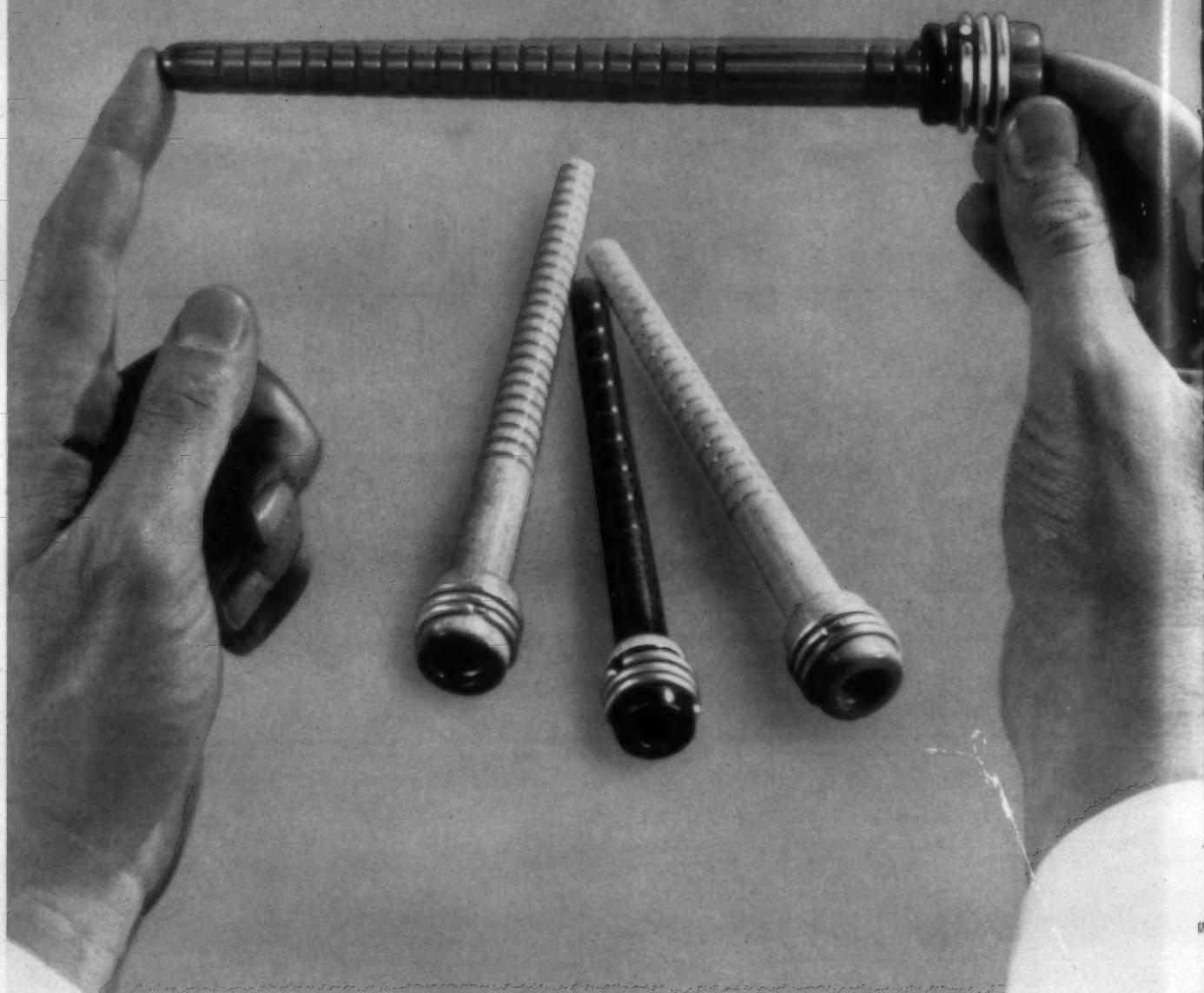
Spindles engineered for special applications

HARTFORD MACHINE SCREW COMPANY

DIVISION OF STANDARD SCREW CO. ROUTE 3, BOX 314, GREENVILLE, S.C.

BULLETIN is published by Clark Publishing Co., 6, N.C. Subscription year in advance, \$2.00. Entered as second-class mail matter, June 1, 1911, at Postoffice, Greenville, N. C., under Act of Congress, March 2, 1897.





From Tip to Butt . . .

A Draper bobbin incorporates all of the features found to be desirable in a quality bobbin;

1. Finest raw materials
2. Engineering . . . by men who *know* bobbin requirements
3. Uniformity in manufacture
4. Proven finishes

Each Draper bobbin is a custom-made example of precision production wherein minimum tolerances, consistent with a practical woodworking operation, are maintained.

The cost of an individual bobbin is small, but annual mill expense for bobbins is considerable. Specify the best for *both quality and economy* . . . a Draper bobbin.



**DRAPER
CORPORATION**

Hopedale, Mass.

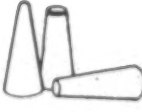
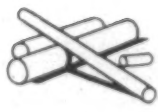
Atlanta, Ga.

Greensboro, N. C.

Spartanburg, S. C.



Here's the reason

why Sonoco cones  ... Sonoco tubes 
 Sonoco spools  ... and other textile paper
 specialties have become known as "Standard
 of the world"  wherever textiles are made!
 For more than 50 years Sonoco has solved the
 difficult paper carrier problems of the industry...
 and we're fully equipped and staffed to help you too!



SONOCO PRODUCTS COMPANY

MAIN OFFICE — HARTSVILLE, S. C.

MYSTIC, CONN. • AKRON, IND. • LOWELL, MASS. • PHILLIPSBURG, N. J.

LONGVIEW, TEXAS • PHILADELPHIA, PA. • LOS ANGELES, CAL.

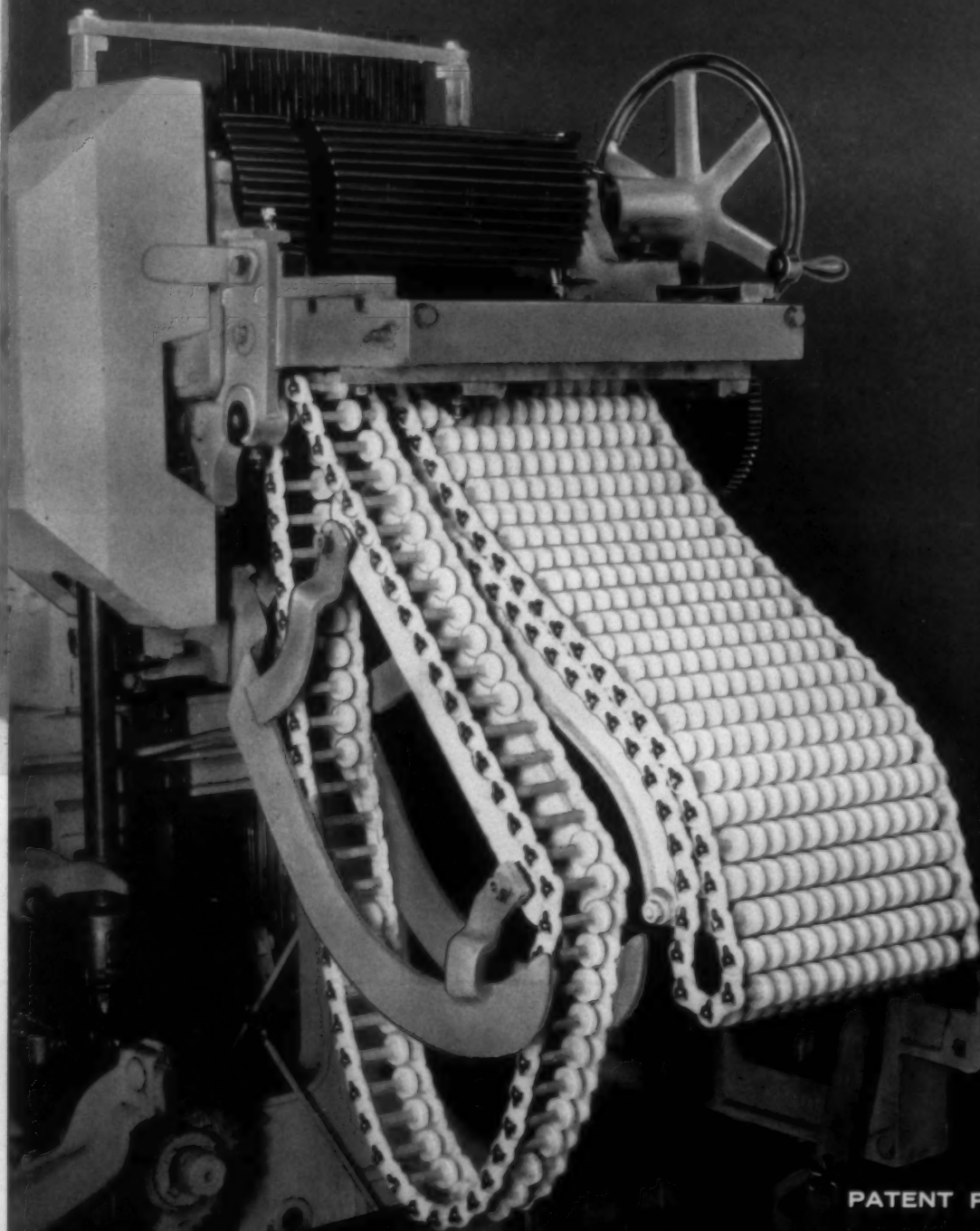
GRANBY, QUEBEC • BRANTFORD, ONT. • MEXICO, D. F.

DEPENDABLE SOURCE OF SUPPLY

See Sonoco Products on display at Booths 507-508—Knitting Arts Exhibition, April 29-May 3—Atlantic City.

NEVER BEFORE AVAILABLE!

The ancient art of weaving receives its



PATENT PENDING

FIRST BASIC IMPROVEMENT

since the invention of the automatic loom!

After many months of thorough testing in several prominent textile mills, H. F. LIVERMORE CORPORATION, dedicated exclusively to the making of Improved Loom Parts, *announces*

HFL ENGINEERED **NYLON** pattern chain *

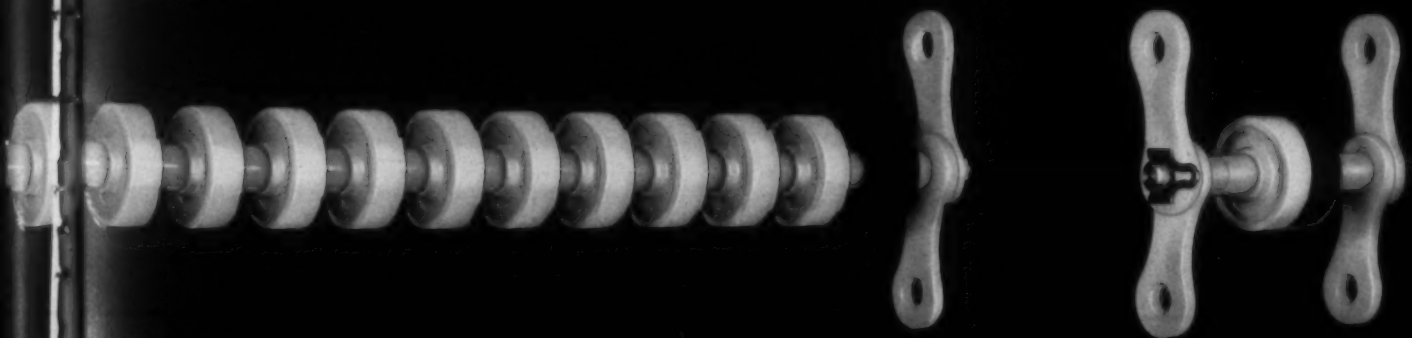
... a radical solution to some of the most baffling problems encountered in the weave room.

Note these remarkable advantages:

- 1 Reduces weight 66%
- 2 Minimizes friction and wear on links, risers and sinkers
- 3 Requires no lubrication
- 4 Maintains dimensional stability of all components of the chain
- 5 Eliminates skips and smashes
- 6 Eliminates downtime formerly caused by pattern chain failure
- 7 Simplifies handling, in pattern changing
- 8 Permits use of colored risers, for setting up pattern
- 9 Improves quality
- 10 Increases production

Again LIVERMORE LEADERSHIP asserts itself!

Brochures upon request



HFL

IMPROVED LOOM PARTS

H. F. LIVERMORE CORPORATION

ESTABLISHED 1887

EXECUTIVE OFFICES & PLANT
BOSTON 34, MASS.

SOUTHERN DIVISION
GREENVILLE, S. C.

When operating temperatures and size stability
are critical use...

NEW TEN-O-FILM® STARCHES



Fast cooking, easy desizing make these new corn starches a favorite for synthetics and combed cottons

Ten-O-Film has the stability and ease of removal necessary for spun synthetic yarns and blends, for combed cotton yarns and for worsteds.

Despite prolonged heating and circulating you can count on Ten-O-Film to maintain its viscosity at slashing temperatures. And when temperatures fall, it will resist gelation, even far below normal operating levels. If necessary, these new starches can be used with excellent results when humidity conditions in the weave room are lower than normal.

Ten-O-Film cooks quickly. You can have a completely stable size in 30 minutes after it reaches the

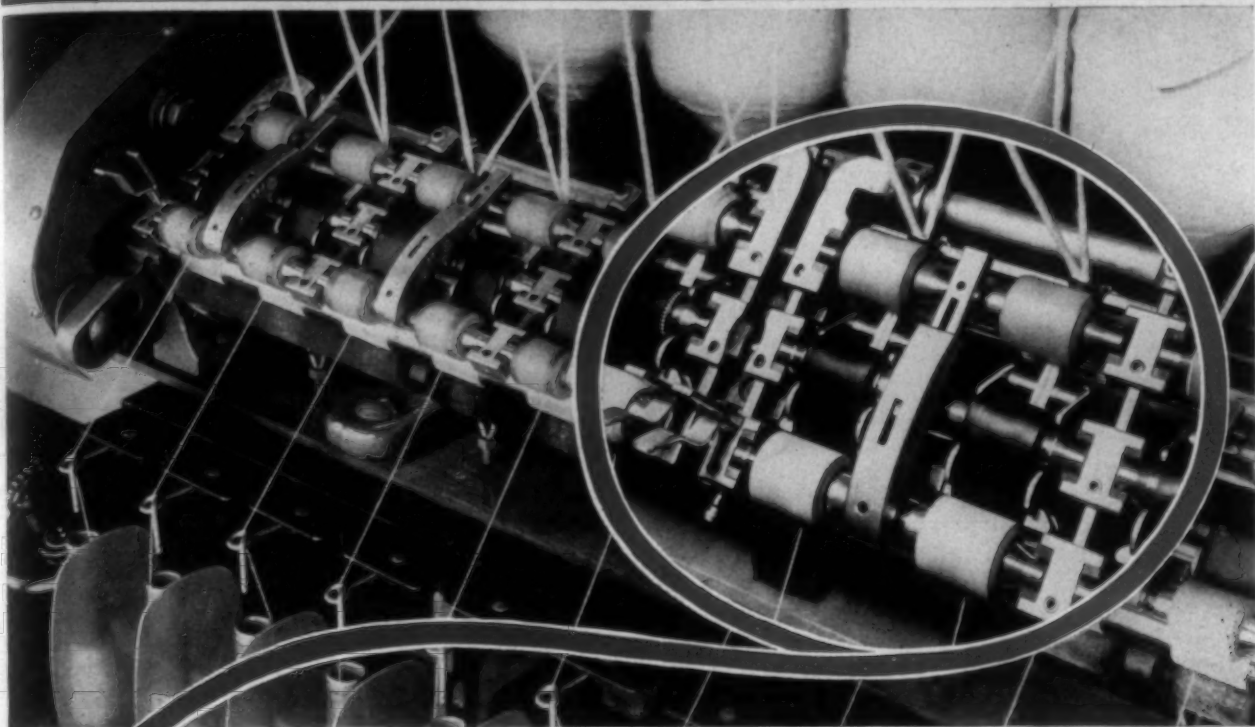
boil. This product provides high film strength, flexibility and stability in a complete range of fluidities.

Ask the man from Corn Products. Ready to assist you in any way, he has at his disposal the most complete laboratory and technical facilities in the industry. The man from Corn Products can also provide engineering service for the installation of bulk-handling equipment. Write or phone for information, there is no obligation.



CORN PRODUCTS SALES COMPANY
17 Battery Place, New York 4, N. Y.

**Corn Products makes these famous starches for the textile industry—
Eagle • Foxhead • Globe • Hercules • Ten-O-Film • Globe Dextrines & Gums**



- No gradual build-up of drag as experienced with anti-friction rolls
- More uniform yarn—due to concentricity and free running
- 5/8" dia. rolls afford good cushion — no buffing problems
- Low bearing replacement cost
- Reduced cleaning
- Reduced oiling
- Perfect alignment

SAVE

ON PRODUCTION COSTS AND INCREASE QUALITY

WITH THE

BOULIGNY

TRU-DRAFT

2,769,500 spindles are now operating with Whitehead Permalube cap bar nebs and saddles and Bouligny hardened steel rolls.

The Mills in which this equipment is installed report a 30 to 40% return on their investment.

The Bouligny Tru-Draft System is now complete from roller beam up—with Drafts up to 50.

Our trained technical staff can assist you on any spinning problem.

HARDENED STEEL ROLLS • ROLLER STANDS • PERMALUBE NEBS AND SADDLES • CRADLES • COMPOUND GEARING
CYLINDERS • CYLINDER BALL BEARINGS • BALL BEARING TENSION PULLEYS • LIFTER RODS AND BUSHINGS
PERMALITE SEPARATORS

the BOULIGNY COMPANY

DIVISION OF R. H. BOULIGNY, INC.
CHARLOTTE, N. C.



We match

INVESTMENTS

with our clients. They contribute the production skills of an independent mill organization. We contribute the know-how and experience of over 50 years of specialization in the merchandising of fabrics on a nationwide basis. The dividends: national market coverage plus steady sales growth, year after year.

WILLIAM L.

BARRELL

COMPANY, INC.

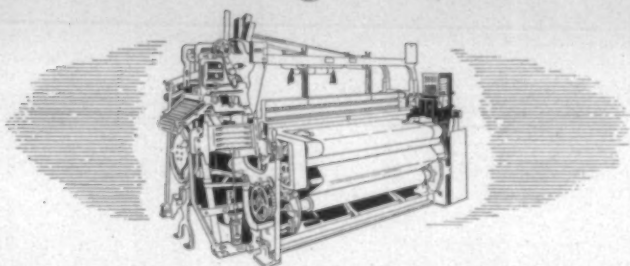
40 Worth Street, New York 13, N.Y.

Chicago • Seattle • St. Louis • Dallas • Baltimore

Los Angeles • Atlanta • Boston

BE SURE

*you get the **TOP PERFORMANCE**
that's built into every **C&K LOOM***



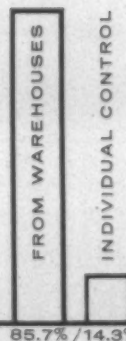
BE SURE

*you use only **LOOM PARTS**
made by **C&K***

...and here's proof that mills find it pays to buy C&K:

85.7% of all maintenance items sold in 1956 were *on hand* and *shipped* from strategically located warehouses.

The balance, a mere 14.3%, was processed through C&K shops on an *individual control* basis for prompt shipment.



85.7% / 14.3%



CROMPTON & KNOWLES
Corporation

MANUFACTURER OF
THE WORLD'S LONGEST LINE OF AUTOMATIC BOX LOOMS

•
WORCESTER 1, MASSACHUSETTS, U. S. A.
CHARLOTTE, N. C. • PHILADELPHIA, PA. • ALLENTOWN, PA.
Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.
Crompton & Knowles of Canada Ltd., Montreal, Quebec

THE NATIONAL SCENE



LESTERSHIRE BOBBIN PULLS 357 TONS DEAD WEIGHT—Something new in railroading—and textiles—took place recently at the Wilmington, Del. yards of the B & O Railroad. In a unique test, designed to

dramatize bobbin strength under severe tension, a Lestershire Bobbin by National acted as "draw-bar" for 18 freight cars with a total dead weight of 736,700 pounds.



A NEW KIND OF "DRAW-BAR" FOR RAILROADS—Suspended between a three-unit diesel and a 357-ton string of cars, the Lestershire Bobbin awaits its supreme test. No abuse received in service will ever equal the punishment it must take in just a few minutes.



Send for new, authoritative Bobbin Handbook. The only manual of its kind in the industry. 12 pages of essential data on bobbins—how to choose, materials of construction, types and uses. Yours without obligation. Just write Department V-4.



NATIONAL
VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

In Canada: NATIONAL FIBRE CO. OF CANADA, LTD., Toronto 3, Ont.



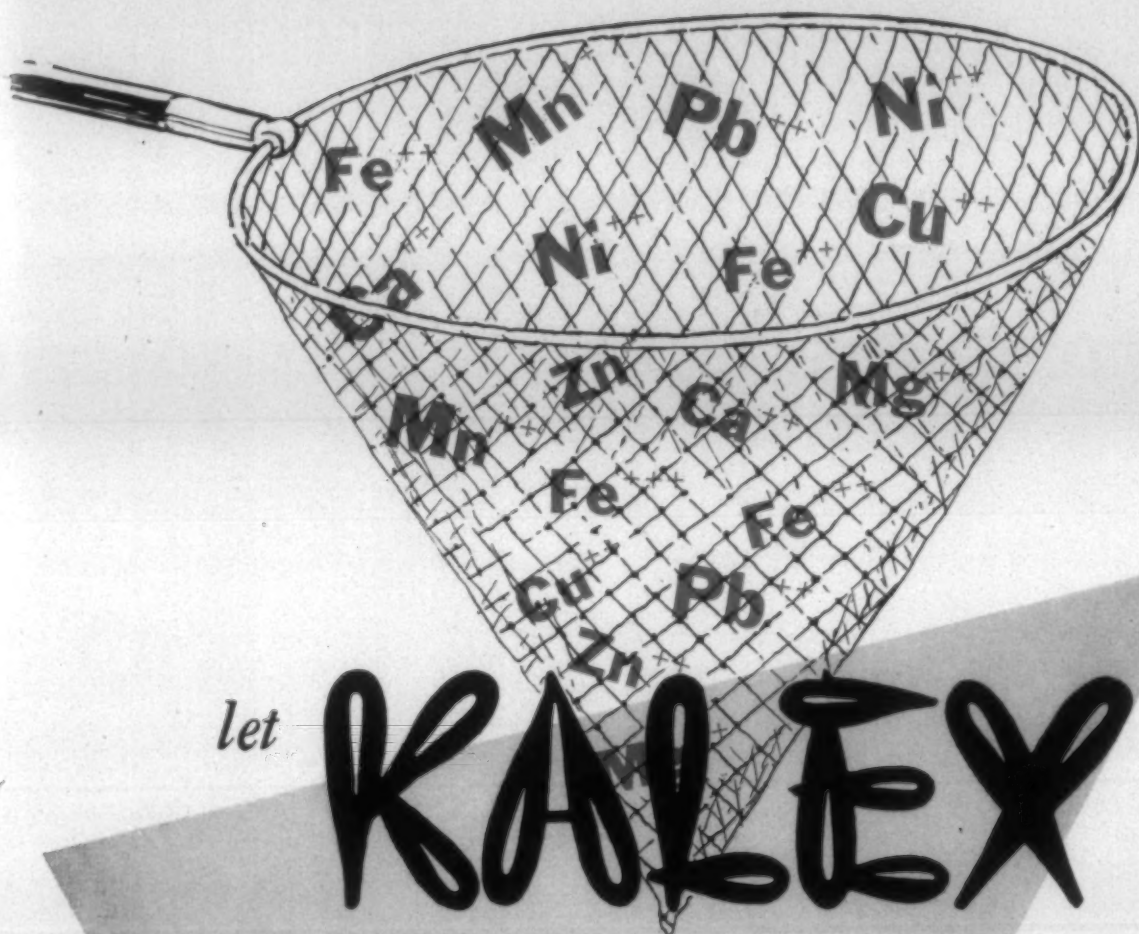
BEGINNING THE SUCCESSFUL TEST—Here, National engineers shackle bobbin into test harness. Bobbin chosen was a Precision Bobbin featuring Lestershire patented anchor screw construction. Heads are made of Vulcanized Fibre, barrel is hard Northern Maple.



THE BOBBIN PULLS—AND HOLDS! The full weight of 18 freight cars fails to pull the Lestershire Bobbin apart. Reasons: (1) Unsurpassed materials—hard, dense Vulcanized Fibre combined with hard Northern Maple. (2) Unmatched experience in precision bobbin design and construction.



STANDARD AND SPECIAL BOBBINS FOR EVERY USE. National makes scores of standard bobbin types. And wherever synthetic yarns, larger "packages," and higher rotating speeds demand improved designs, National develops them. Here is your source of bobbins for almost any spindle, speed or yarn in use today.



clean up your caustics

Have you discovered the advantages of using Kalex compounds?

In binding and deionizing heavy metal and alkali earth ions in caustic solutions, these water-soluble organic ion exchangers exhibit remarkable chemical stability at *all* temperatures. In fact, the effective sequestering properties of Kalex compounds permit their use in a variety of textile operations — kier boiling, bleaching, mercerizing, dyeing sulfur colors and wherever traces of iron, zinc, copper, manganese, nickel, lead, magnesium and calcium are harmful.

KALEX E and KALEX IR are especially effective for complexing iron in caustic solutions; however, they also do an excellent job of chelating calcium, magnesium, copper, nickel and cobalt. Get in touch with us today and let us show *you* how KALEX products can improve your processes.

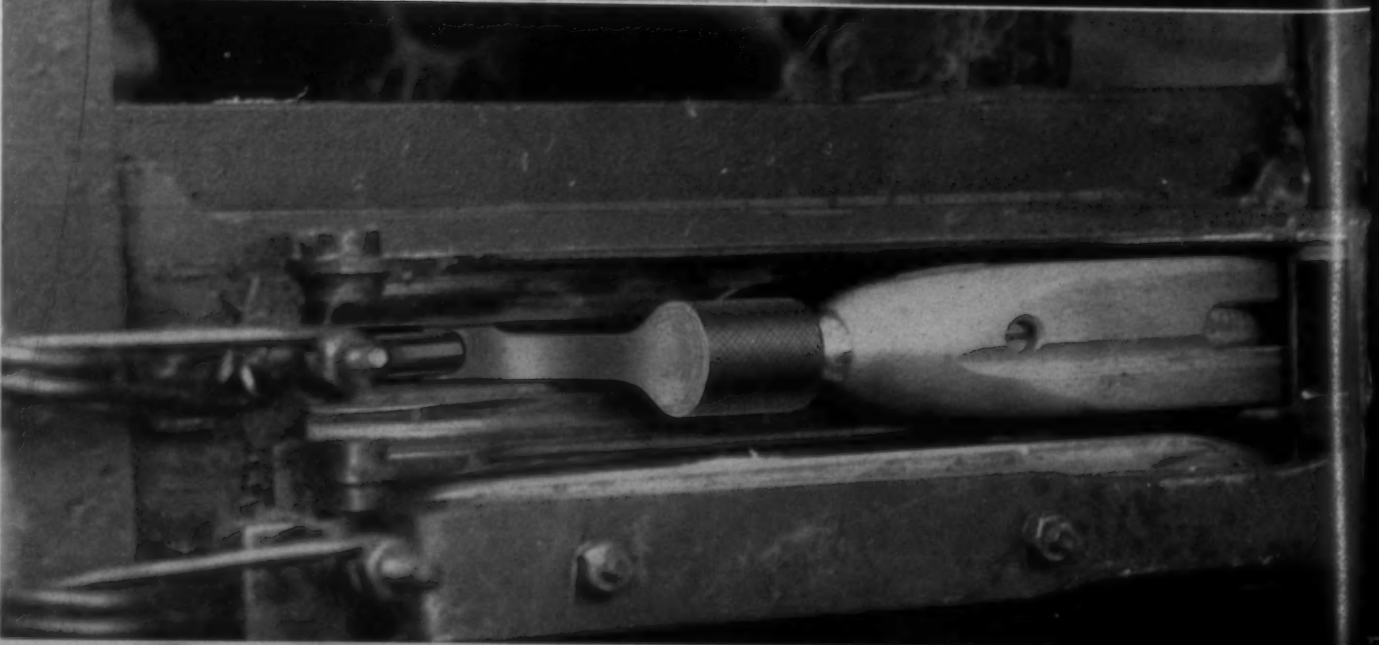


the Hart Products Corporation

1440 BROADWAY, NEW YORK 18, N. Y.

Works and Laboratories, Jersey City, N. J.

Hart Products Company of Canada, Ltd., Guelph, Ontario



Protect all points of shock

increase production and lower operating costs

With Dayton Thorobred

Deluxe Lug Straps
Drop Box Pickers

Install Dayton Thorobred Drop Box Pickers and Deluxe Lug Straps and you immediately provide *double* protection against shock for expensive loom parts. They'll take millions of shuttle contacts and picker stick thrusts without fatigue. Because of their scientific construction they offer the *exact amount of shock absorption needed for the specific degree of shock at each and every point of contact*. Check these construction features:

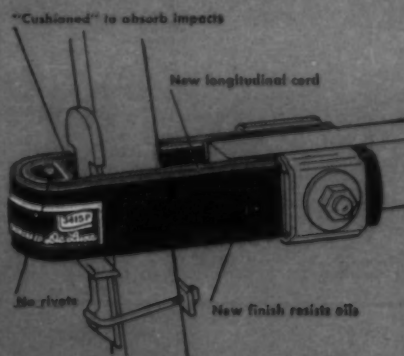
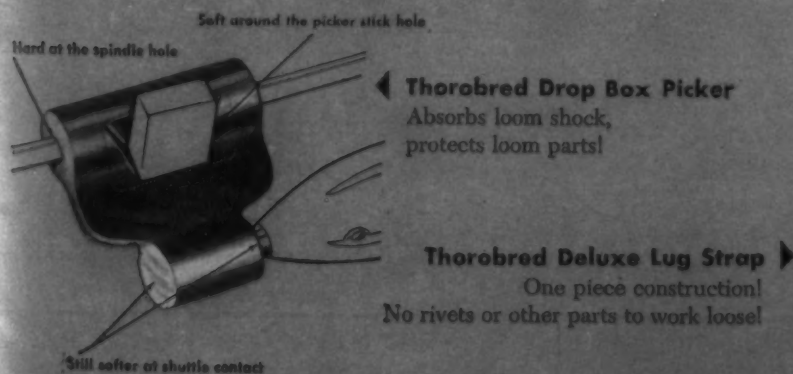
Dayton Thorobred Deluxe Lug Straps, having a one piece, rivet-free construction, give twice the service of ordinary straps. The molded plug, built into the strap loop, cushions the thrusts of the picker stick in rapid motion. Added strength is gained from a longitudinal cord in the center of the lug. Easily applied, they work perfectly in any weather.

Dayton Thorobred Drop Box Pickers, built with 3-Point Density control, provide:

1. Extra hard composition in the bearing surface around the spindle hole.
2. Softer composition around the picker hole to take terrific impacts, reduce stick wear.
3. Still softer composition at the shuttle contact to prevent loosening of shuttle point.

Dayton Drop Box Pickers are available in reversible or non-reversible construction.

To double your protection of expensive, related loom parts, increase production and cut costs ask your Dayton Jobber for additional details — he'll be calling on you soon. Or write direct to The Dayton Rubber Co., Textile Division, 401 S. C. National Bank Bldg., Greenville, S. C.



Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving

© D. R. 1957

stay with a manufacturer for...

HYDROSULFITE AWC HYDROZIN HYDROSULFITE BZ in any quantity

Make Jacques Wolf Your Major Source For

Hydrosulfite AWC

Sodium Formaldehyde Sulphoxylate ($\text{NaHSO}_2 \cdot \text{CH}_2\text{O} \cdot 2\text{H}_2\text{O}$), for application and discharge printing.

Hydrozin

Soluble Zinc Formaldehyde Sulphoxylate [$\text{Zn}(\text{HSO}_2 \cdot \text{CH}_2\text{O})_2$], for stripping wool and acetate fibers, and discharge printing of acetate dyed goods.

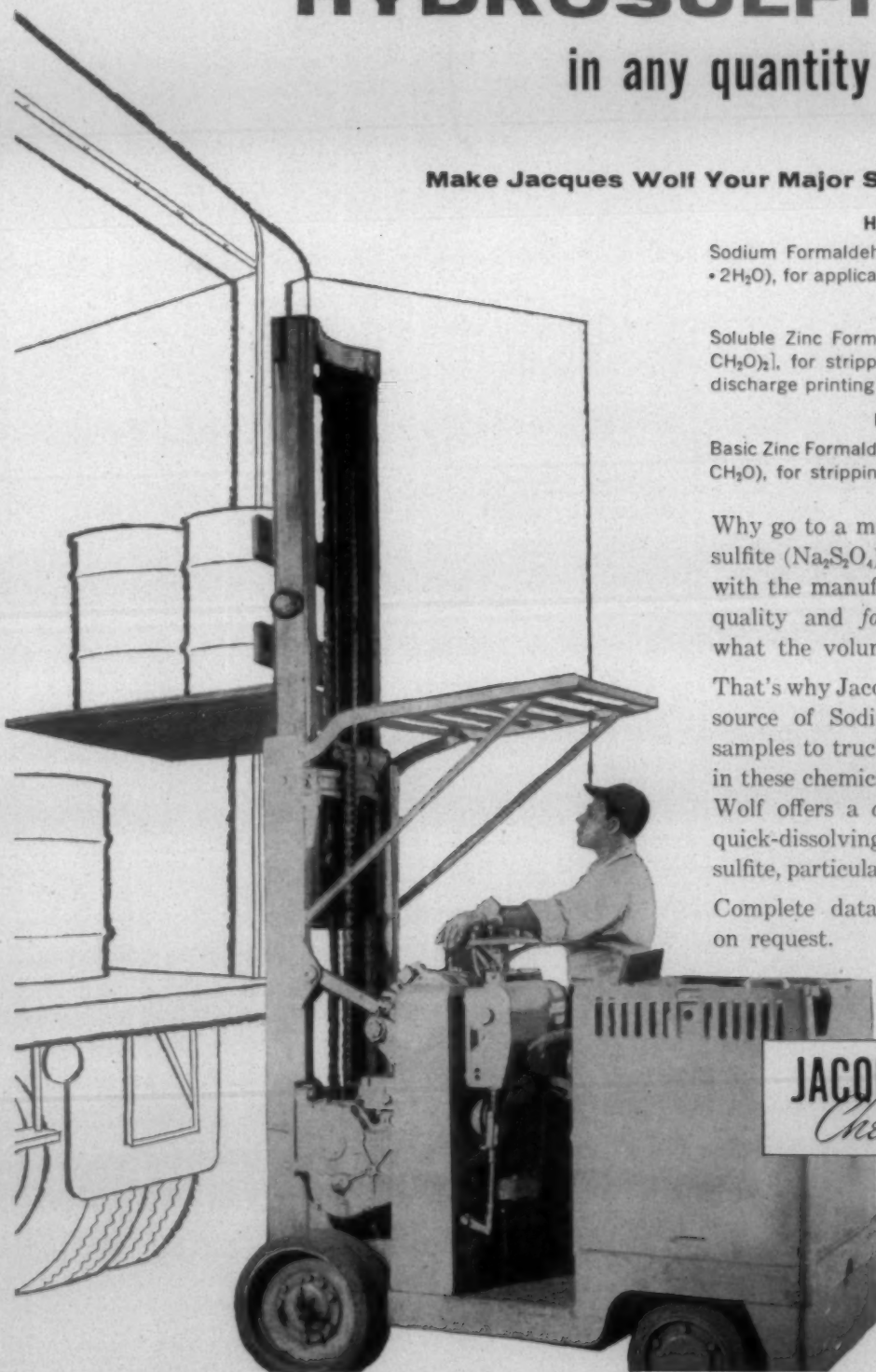
Hydrosulfite BZ

Basic Zinc Formaldehyde Sulphoxylate ($\text{Zn} \cdot \text{OH} \cdot \text{HSO}_2 \cdot \text{CH}_2\text{O}$), for stripping wool stock in an acid medium.

Why go to a middleman for Sodium Hydrosulfite ($\text{Na}_2\text{S}_2\text{O}_4$), when you can deal *directly* with the manufacturer... and get *controlled* quality and *faster* delivery... no matter what the volume!

That's why Jacques Wolf is your most *natural* source of Sodium Hydrosulfite—from test samples to truckload quantities. Specializing in these chemicals for over 40 years, Jacques Wolf offers a *complete line* of non-dusting, quick-dissolving, full strength Sodium Hydrosulfite, particularly for self-feeding operations.

Complete data and samples will be sent on request.



JACQUES WOLF & CO.
Chemicals PASSAIC, N. J.

Plants in: Clifton, N. J.,
Carlstadt, N. J.,
Los Angeles, Calif.



new help for you!



Gulf Petro-engineering Service

**... now available to all users
of petroleum products**





Proper engine tune-up procedures mean maximum fuel economy in fleet operations. Gulf Sales Engineers work closely with fleet maintenance superintendents to help save fuel, lengthen periods between overhauls, and increase availability of equipment.

Gulf Sales Engineers can provide practical assistance to paper mill operators on any process or problem that involves petroleum products.



Gulf Petro

**brings you practical
involving the use of**

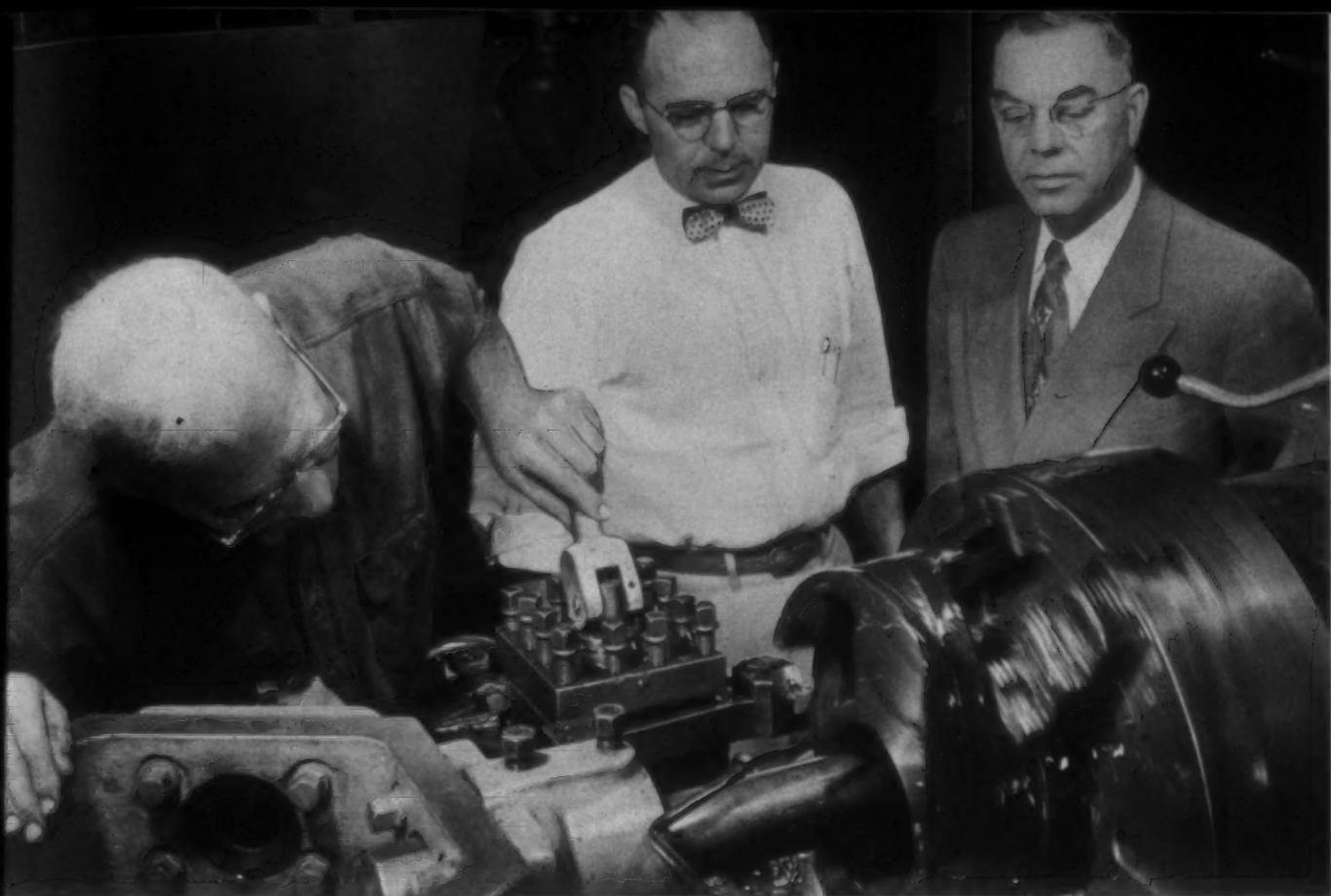
If you are engaged in manufacturing, mining or quarrying . . . construction or transportation . . . communication or public utility service—you can profit from Gulf Petro-engineering Service.

All of these fields use petroleum products. Many problems arise in connection with their use—problems of proper selection, of storage, of dispensing, of application schedules. And, most important of all, problems of equipment performance!

Very few companies, however, find it practical to hire or train qualified people to perform this specialized engineering job. Gulf offers you its own trained staff to assist you with these problems.

Gulf Petro-engineering Service puts a petroleum specialist in your plant or other base of operations to give you impartial, expert advice on any problem in any way related to the uses of petroleum products.

You can get Gulf Petro-engineering Service if you are



A Gulf Petro-engineering Service specialist can help you select the most suitable cutting fluid for each machining operation. Chances are he will find practical ways to improve production, increase tool life and lower costs.

-engineering Service

**help on every problem and process
petroleum products**

a user of petroleum products—whether or not you have been buying those products from Gulf.

There is no charge for this service.

In essence, here's what Gulf Petro-engineering Service offers you . . .

1. Expert help with any immediate problem involving use of *any* petroleum product.
2. Practical help on any long-range problem, including those which may involve new uses or new types of petroleum products.
3. A survey of your entire operation. Aim: to help you achieve greater efficiency and economy in the use of fuels, lubricants, cutting oils, rust preventives and process oils.

Gulf has a large group of trained and experienced sales engineers ready to serve you. The typical Gulf Sales Engineer who contacts you is a graduate engineer. He has been well-schooled in the formulation and uses of

petroleum products. He has the versatility and invaluable knowledge that comes through many years of practical field experience.

If yours is a highly involved or difficult problem, he can enlist the help of another specialist—a Gulf Product Application Engineer.

Behind Gulf field representatives are more than 1,300 scientists, engineers, metallurgists and chemists at Gulf laboratories specializing in the manufacture and application of petroleum products. Their knowledge, coupled with the experience of field engineers, adds up to a broader, better service than has ever been offered before to industrial and commercial users of petroleum products.

Take advantage of Gulf's Petro-engineering Service now. Use the coupon on the next page to send for booklet describing the complete service—or write or call your nearest Gulf office.

Gulf Petro-engineering Service

can be put to work for you immediately on
any or all of these problems. It can help you . . .

- Plan the installation of more efficient fuel and lubricant storage and dispensing facilities.
- Get maximum fuel economy through proper engine tune-up procedures.
- Obtain maximum heat or power from each gallon of fuel oil through more efficient combustion.
- Establish proper oil change periods.
- Cut maintenance costs through improved application of lubricants.
- Select rust preventives according to the exact kinds of protection you need.
- Eliminate or reduce oil vapors, sludge deposits and corrosion of fuel oil storage tanks.
- Reduce the number and variety of lubricants used.
- Establish proper flushing procedures for both old and new equipment.
- Control dust on plant grounds and parking lots.

*If you are faced with any of these common problems—
or with any problems involving petroleum products in
use—simply call your nearest Gulf District Office.*

GULF OIL CORPORATION
Gulf Building, Pittsburgh 30, Pa.

- ☐ Send free Gulf Petro-engineering Service booklet.
☐ Have a Gulf Sales Engineer call.

Name _____ Title _____

Company _____

Street _____

City _____ Zone _____ State _____



GULF OIL CORPORATION
Pittsburgh 30, Pa.

Gossett's NEW BIG drawing coiler gives

**TWICE the continuous running time
... HALF the creeling time!**



*Photo shows a recent installation
in a prominent mill of Gossett's
NEW BIG drawing coilers . . .
size 15" x 42"*

From Gossett Machine Works, pioneers in the big coiler conversion technique, comes Gossett's NEW BIG Drawing Coiler!

Here's THE big coiler which is especially constructed for greater all-round efficiency at high speeds!

Smooth, low-noise operation and longer wear are features built-in by Gossett's master technicians.

Get twice the continuous running time . . . cut

your creeling time in half . . . install Gossett's NEW BIG drawing coilers on your present drawing frames NOW!

We convert 10" and 12" drawing coilers to 14" through 15" in diameter and 36" to 42" in height.

For full information and prices, write

B. W. GOSSETT
President

E. C. MASON
Sales Manager

D. W. SMITH
N. C.-Va. Representative

GOSSETT

Machine Works, Inc.

GASTONIA, NORTH CAROLINA

Service




**NEW UP-TO-THE-MINUTE
RESEARCH LABORATORIES**



FIELD LABORATORIES



**FAST, EXPERT COUNSEL
ON YOUR PROBLEMS**

Products




**PEARL
HOMOGIZING PEARL No. 173**



WAXY R-GUM No. 10



WAXY FILM No. 75



PRINTEX No. 200



HUBCO No. 30 F.L.

...make it **EASY** to **IMPROVE**
textile sizing, printing, finishing...

OK SERVICE—Top flight textile research men working with the finest of modern laboratory facilities develop better textile starches for you . . . carefully control formulae uniformity. A fleet of Hubinger planes bring OK field laboratories and expert textile technicians right to your door . . . and fast.

OK PRODUCTS—A wide range of profit proven products provide an economical means for improved sizing, printing and finishing. **SPECIAL OK TEXTILE STARCHES** are *tailor-made* to meet your needs.

Let **OK SERVICE** and **OK PRODUCTS** help you save time, improve quality and profit more. Contact the OK representative nearest you . . . you'll find him OK too.

IRA L. GRIFFIN & SONS
Southern Agents
P. O. Box 10474
Charlotte, N. C.
(Phone: Franklin 6-5583)

BOSTON OFFICE
192 State Street
Boston, Massachusetts
(Phone: Capitol 7-3268)

JOE R. MYERS
1817 Dell Drive
Columbus, Georgia
(Phone: 7-2244)

NEW YORK OFFICE
500 Fifth Avenue
New York 36, New York
(Phone: Longacre 5-4343)

CARL F. MERRITT
Box 346-A
Piedmont, S. C.
(Phone: Greenville 2-0424)

Also offices in
Chicago and
Los Angeles

The Hubinger Company

KEOKUK, IOWA



Perfected Cleaning! ceiling to floor

- Each unit self-propelled.
- Independent air streams for room surfaces, frame areas, floor.
- Air directions and velocities are adjustable. Automatic dampers available.
- Sleeves below head height are flexible.
- Frame cleaner adaptable to all creels.

ROOM CLEANER (revolving continuously) for ceiling and other overhead surfaces. High velocity air.

FRAME CLEANER

Rugged track with shielded electric contactors.

Short sleeve for top creel board, tapers and spare roving.

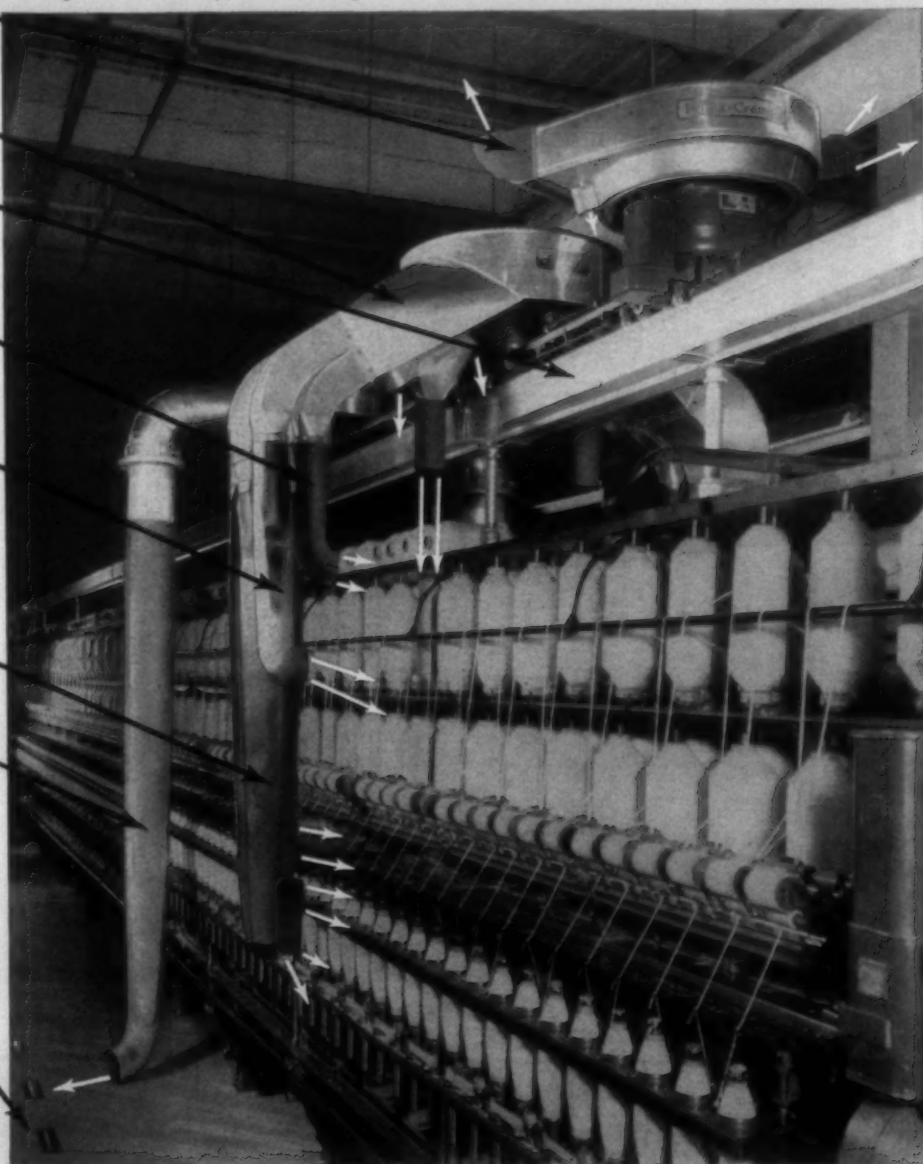
Medium length sleeve for middle creel board and roving tapers.

Long multi-outlet sleeve for bottom creel, thread board, roll stand area, ring rail, spindle rail and under-frame. High velocity air.

FLOOR SWEEPER

Floor sweeper outlet turns on curves. Low velocity air.

Vacuum removal of floor sweepings at two or more alleys.



Parks-Cramer Company

FITCHBURG, MASS. • CHARLOTTE, N.C. • ATLANTA, GA.

Purrs like a kitten

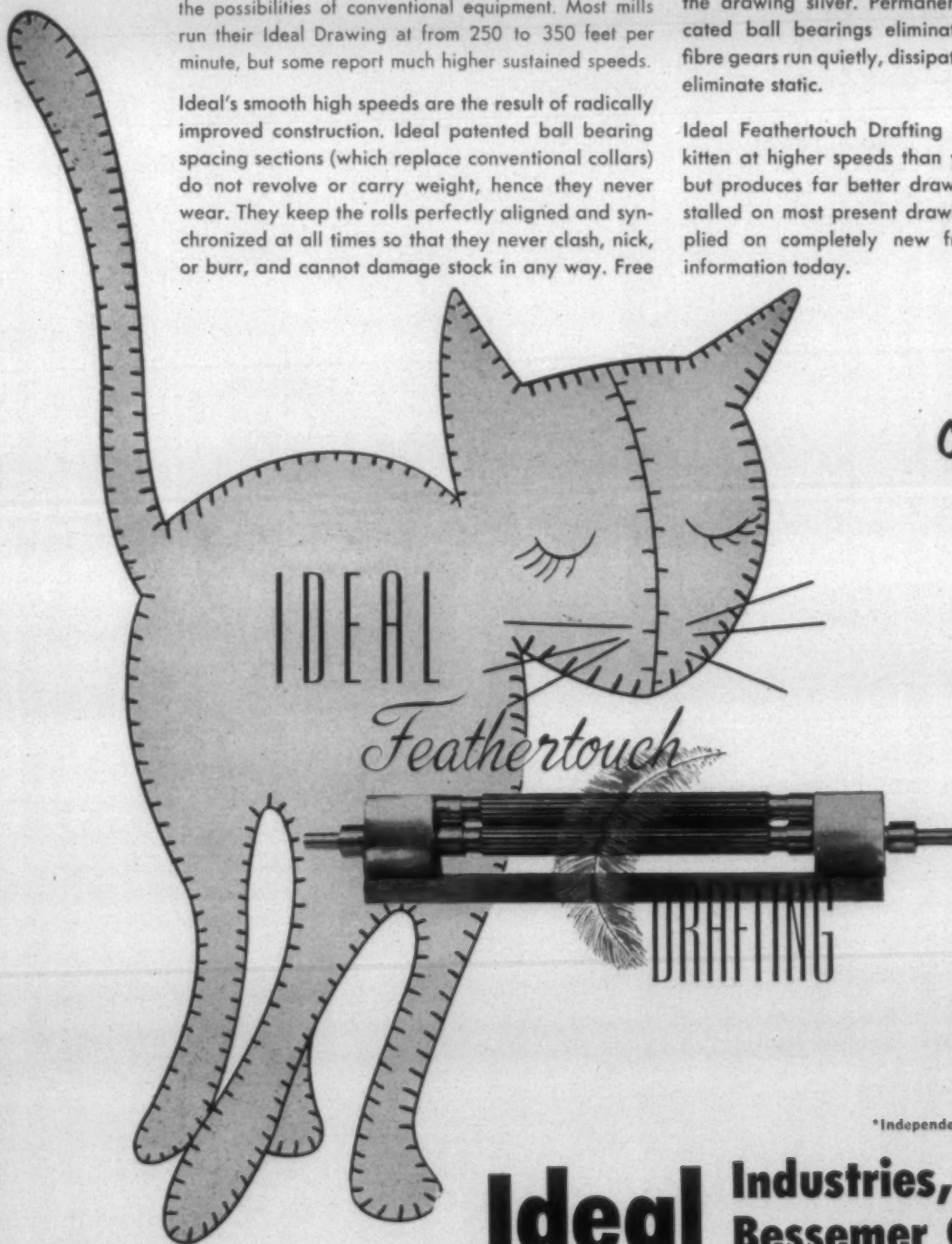
at 450 feet a minute*

Ideal High Speed Ball Bearing Drawing** runs smoothly and quietly at sustained speeds far beyond the possibilities of conventional equipment. Most mills run their Ideal Drawing at from 250 to 350 feet per minute, but some report much higher sustained speeds.

Ideal's smooth high speeds are the result of radically improved construction. Ideal patented ball bearing spacing sections (which replace conventional collars) do not revolve or carry weight, hence they never wear. They keep the rolls perfectly aligned and synchronized at all times so that they never clash, nick, or burr, and cannot damage stock in any way. Free

floating top rolls automatically adjust to card sliver variations and thus eliminate thick and thin places in the drawing sliver. Permanently sealed and lubricated ball bearings eliminate friction. Laminated fibre gears run quietly, dissipate heat, and practically eliminate static.

Ideal Feathertouch Drafting not only purrs like a kitten at higher speeds than you have ever known, but produces far better drawing sliver. Can be installed on most present drawing equipment or supplied on completely new frames. Write for full information today.



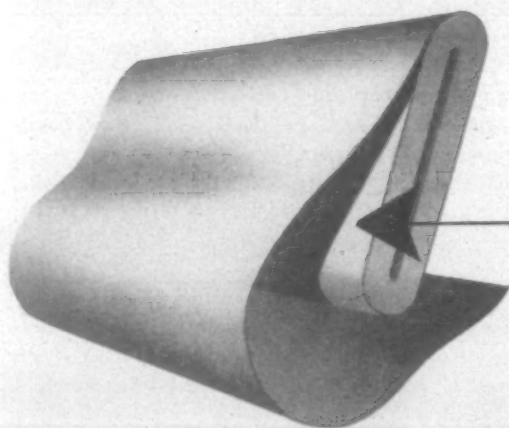
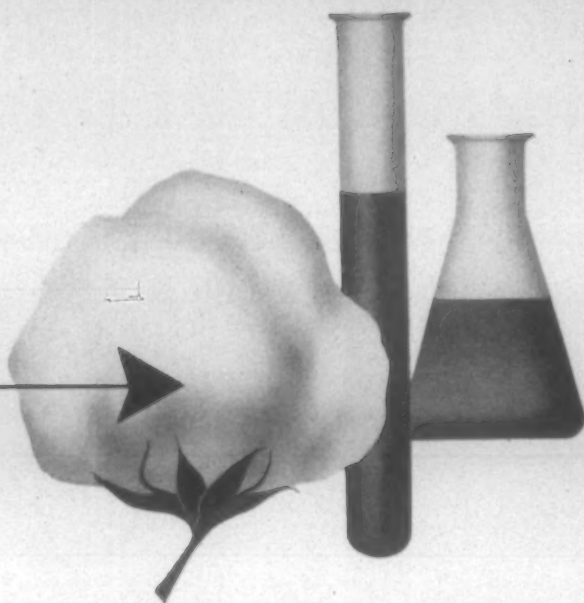
Fine Counts
Coarse Counts
Synthetics
Blends

**Patent Nos. 2,610,363;
2,490,544; 2,412,357.
Other patents pending.

*Independent Testing Laboratory Test

Ideal Industries, Inc.
Bessemer City, N. C.

Wherever the fiber starts...



Wherever the fabric ends...

Westvaco helps to keep textile production flowing

For nearly half a century we have supplied alkalis and other chemicals essential in textile processing and in the manufacture of man-made fibers, dyes and detergents.

With a strong basic position on raw materials and strategic location, Westvaco® is well-equipped to serve textile-producing areas from the mid-South to the Midwest and New England. Our customers are assured of steady supply and exceptionally fast shipments by rail, truck or waterway. Frequently deliveries are made sooner from our plant at South Charleston, W. Va. than from points located many miles closer on the map.

If you produce or process textiles for high fashion to rugged industrials, Westvaco should be your *first source* for alkalis.

fmc
chemicals

Westvaco Chlor-Alkali Division
FOOD MACHINERY AND CHEMICAL CORPORATION

161 E. 42nd St., New York 17 • So. Charleston, W. Va. Charlotte, N.C. Chicago Denver Philadelphia St. Louis

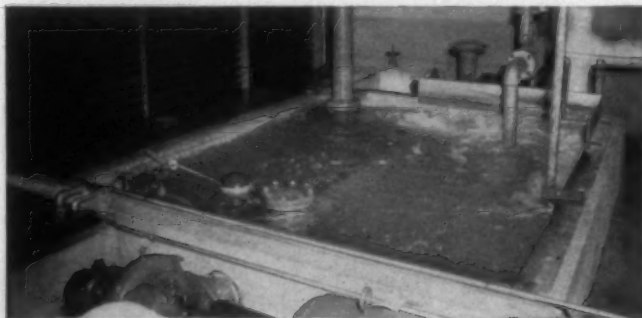
BECCO peroxygen chemicals • FAIRFIELD pesticide compounds • FMC organic chemicals • NIAGARA insecticides, fungicides and industrial sulphur • OHIO-APEX plasticizers and resins • WESTVACO alkalis, solvents, phosphates, barium and magnesium chemicals

Why Owens-Corning Fiberglas chose **AMCO CENTRAL STATION AIR CONDITIONING**

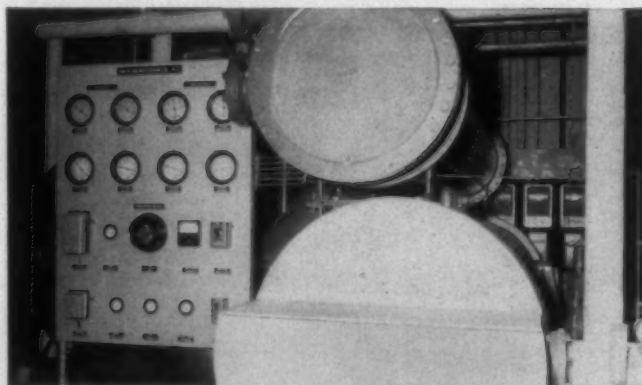
at its Huntingdon, Pa. Plant



Air distribution ducts and zone control atomizers in twisting room at Owens-Corning Fiberglas, Huntingdon, Pa. Widely spaced grille bars and snap-on latches allow quick, easy cleaning and maintenance.



Chilled water reservoir receives excess water from air washers, then recirculates water through chillers as needed.



Refrigeration equipment (chiller at bottom, condenser at top) with indicator and control panel designed and installed by AMCO.

If you want the facts about textile mill air conditioning — central station, unit dry-duct or ductless evaporative cooling — with the advantages and limitations of each system detailed, write for Amco's booklet "Air Conditioning for the Textile Industry". Or better still, ask Amco to recommend the system best suited to your needs. No obligation.

CLOSE-CONTROL HUMIDIFICATION

Owens-Corning, to assure greater operating efficiency throughout its mill, installed an Amco dual (split) system. This system calls for a central station unit augmented by room atomizers which permit the different manufacturing areas to be controlled *independently*, at any point, between 40% and 65% relative humidity.

CLEAN, CONDITIONED AIR

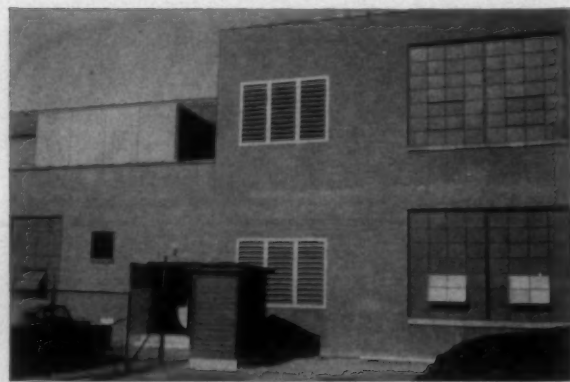
Fresh and recirculated air is thoroughly cleaned and conditioned with the right amount of moisture before distribution by the duct system. Room atomizers raise the moisture content to the level desired for each room, thus assuring ideal conditions for the particular manufacturing process.

CONSTANT YEAR-ROUND TEMPERATURE

Air passed through chilled water spray helps to maintain a year-round 78° F temperature. A total of 550 tons refrigeration capacity keeps work areas independent of outside weather.

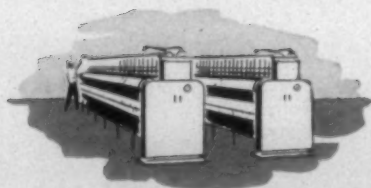
ECONOMICAL OPERATION

A washer bypass takes care of below-maximum heat loads, saving on steam costs. This Amco system also uses steam coils to heat air for supplementary warmth when the weather is extremely cold or when machinery loads are very light.



Exterior view of central station apparatus house at Owens-Corning Fiberglas Corp.

AMERICAN MOISTENING COMPANY, Cleveland, N. C. Branches: Atlanta • Boston • Camden • Providence • Toronto



*"Higher loom speeds
made lubrication
difficult!"*

When a large Southern weaving plant recently had a problem in loom drive lubrication, Sinclair's Representative V. V. Motley, Jr. was asked for a recommendation. He reports:

"This plant had experienced difficulty in lubricating the gear trains that drive the looms. The reduction gears are shielded and the pinions rotate at about 1700 RPM. A grease could not be applied readily or satisfactorily; and, an oil did not provide the retention necessary for the desired lubrication period. In desperation, mixtures of oil and grease had been used in an attempt to lubricate the gears."

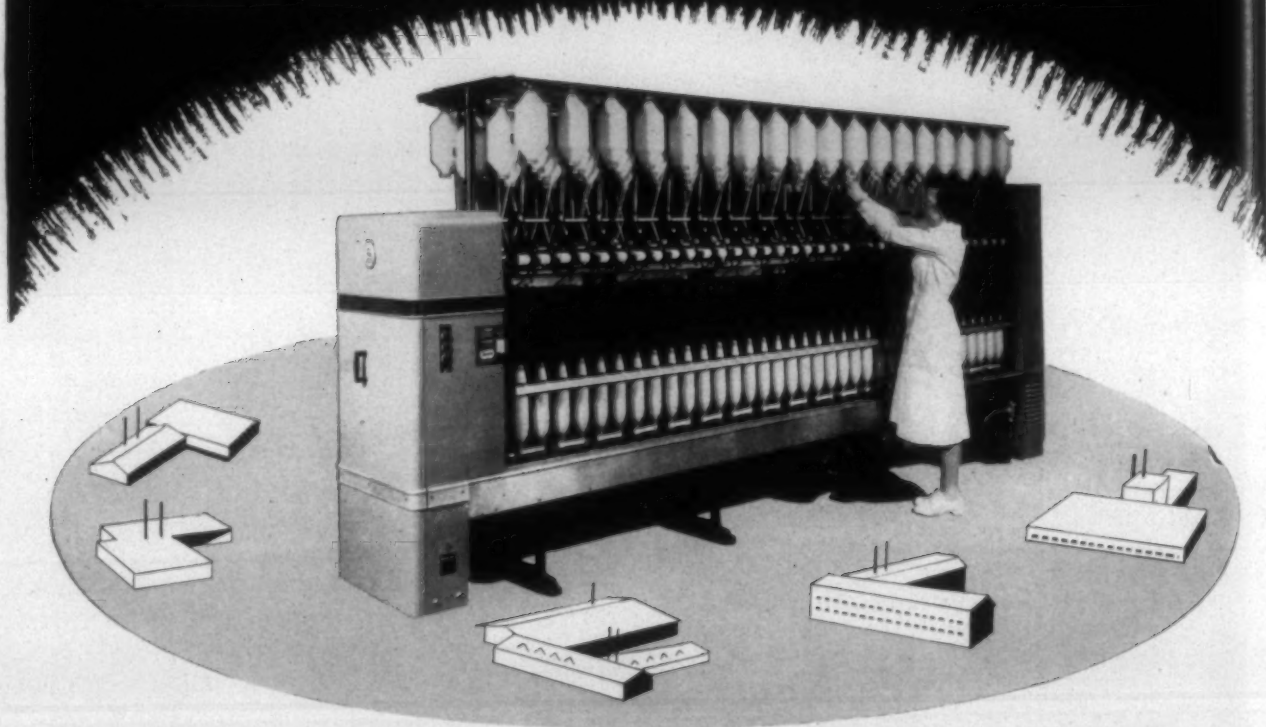
NEEDED: AN ADHESIVE OIL. Mr. Motley continues, "Having had experience with problems of this type, I recommended Sinclair DARTAC #15. I knew it would have the necessary body and adhesiveness needed to solve the problem. Trial runs at this plant were so successful that all four of the company's plants were switched to DARTAC" concludes Mr. Motley.

If you have a problem in textile lubrication, get the benefit of a Sinclair Representative's recommendation. Call a local Sinclair office or write to Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

SINCLAIR TEXTILE LUBRICANTS

The Performance of SACO-LOWELL GWALTNEY SPINNING FRAMES*

IS PRODUCING A NEW ERA OF LOWER COSTS,
HIGHER PROFITS AND IMPROVED YARN QUALITY.



Your mill can match these new Standards of Production
with a Gwaltney Installation.

MILL A

Count	T. M.	Ring Size	F. Roll Speed	SR, %	Net Pounds Per Frame Per 24 Hours
7.25's	2.85	3"	200	94	930
10's	2.94	3"	201	95	686
11's	2.94	3"	197	95	611
13's	2.94	3"	199	95	523
17's	3.00	3"	186	96	378
18's	3.00	3"	185	96	355
24's	3.12	3"	155	97	224
26's	3.25	3"	147	98 1/2	200
28's	3.25	3"	143	99	182

* Efficiency includes traveler change and frame change down times.

** Taken from actual Hank Clock daily readings on 240 spindle frames.

MILL B
WARP

Count	Total Miles per inch	Spindle Speed	Ring Size	Trans- fer Speed	Front Roll Speed	Eff. clency %	Net Pro- duction per Hour
12	4.30	14.88	8600	3.00	6754	184	.087
16	4.75	19.00	9100	3.00	7147	152	.056
20	4.75	21.24	9100	3.00	7147	136	.041
24	4.75	23.27	9100	3.00	7147	124	.031
26	4.75	24.22	9100	2.75	5109	120	.028
30	4.75	26.02	9100	2.75	5109	111	.022

MILL C

Yarn No.	16/1 (Knit)	20/1 (Knit)	22/1 (Knit)	30/1 (Knit)	16/1 (Soft)
Creeling	Double	Double	Double	Double	Double
Cotton	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Twist multiple	3.10	3.25	3.25	3.25	2.50
Hank roving	1.30	1.30	1.30	2.00	1.30
Draft	24.6	30.7	33.8	30.0	24.6
Ring diameter	3"	3"	3"	3"	3"
Spindle speed (rpm)	7200	8300	8300	9000	5500
Front roll speed (rpm)	185	182	174	160	175
Doff time	12 hrs.	16 hrs.	18 hrs.	24 hrs.	10 hrs.
Oz. per bobbin	12 oz.	12 oz.	12 oz.	12 oz.	11-12 oz.
Skein break (#/120 yds.)	150	120	106	78	100 approx.
C.V.	.53	.75	.81	.65	.53 approx.
Traveler speed (ft./min.)	5655	6509	6509	7068	4320
No. of spindles per spinner	14 sides	20 sides	20 sides	26 sides	10 sides
No. of frames per doffer	1680	2400	2400	3120	1200

THE ABOVE INFORMATION IS FACT . . .
SUBMITTED TO US BY MILLS NOW OPERATING
GWALTNEY SPINNING FRAMES.

Mills interested in matching these standards should have a Saco-Lowell Sales Engineer prepare a "Forecast of Savings" based on a Gwaltney-Saco-Lowellizing program.

* NOW OVER 490,000 SPINDLES OF
GWALTNEY IN OPERATION.

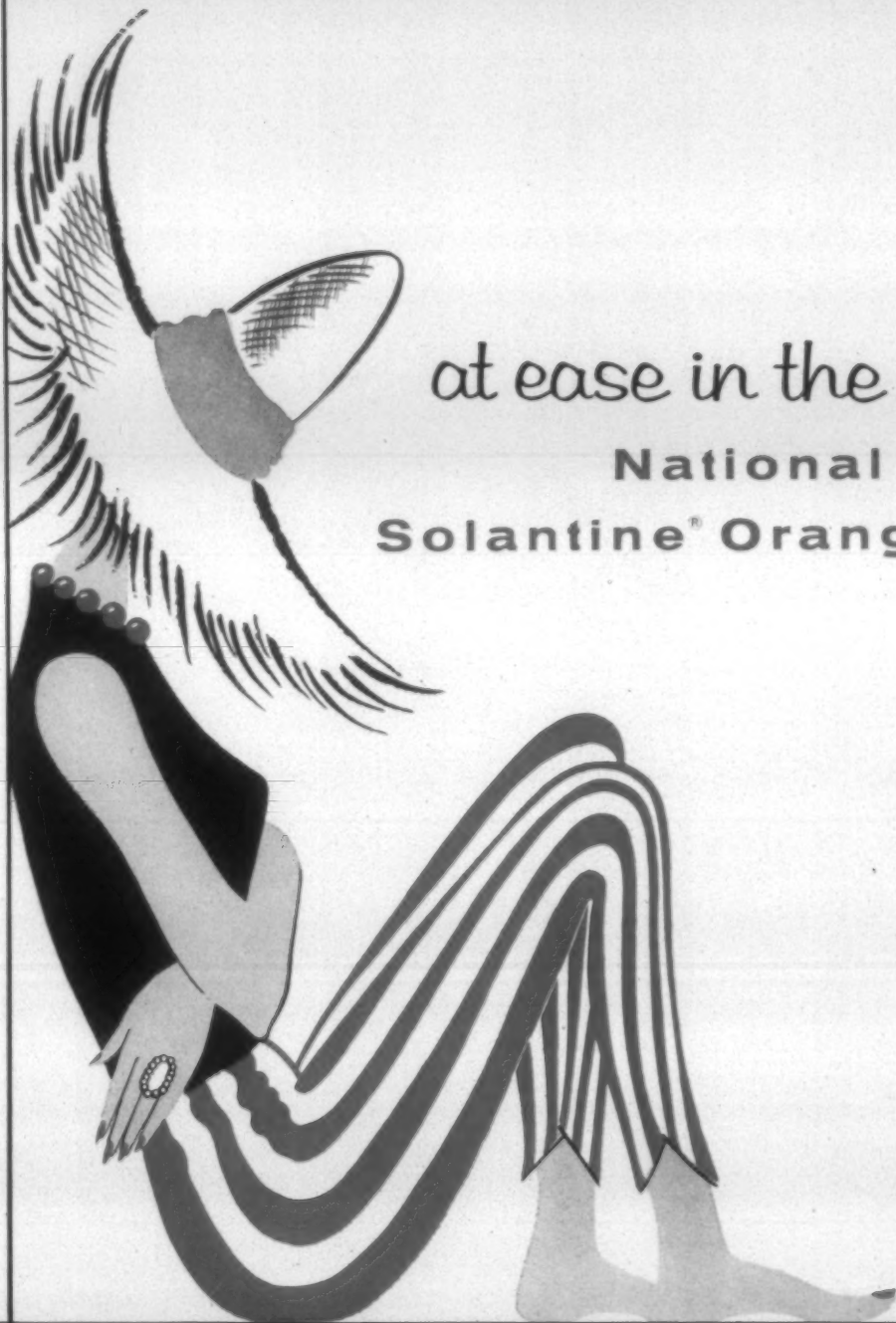
Mill Names on Request



SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at RIDGEFORD and SACO, MAINE, and SANFORD, N. C.
SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA



at ease in the sun!

**National
Solantine® Orange EGL**

Here is a direct dye for moderately bright shades of orange as well as warm tones of brown and tan. Used alone or in combination, it produces very good light fastness and good-to-very-good wet fastness.

Non-dusting and extremely soluble . . . it dyes at low temperatures, levels well and is practically unaffected by metals in the dyebath. Nylon and acetate effects remain practically unstained and excellent whites are obtained with a neutral discharge.

Our nearest office will be glad to send you a working sample and a copy of descriptive Bulletin No. 438 detailing complete fastness and working properties.

NATIONAL ANILINE DIVISION ALLIED CHEMICAL & DYE CORPORATION • 40 RECTOR ST. NEW YORK 6, N. Y.

Branches: New York, Atlanta, Boston, Charlotte, Chattanooga, Chicago, Columbus, Ga., Greensboro, Los Angeles, New Orleans, Philadelphia, Portland, Ore., Providence, Richmond, San Francisco, Toronto

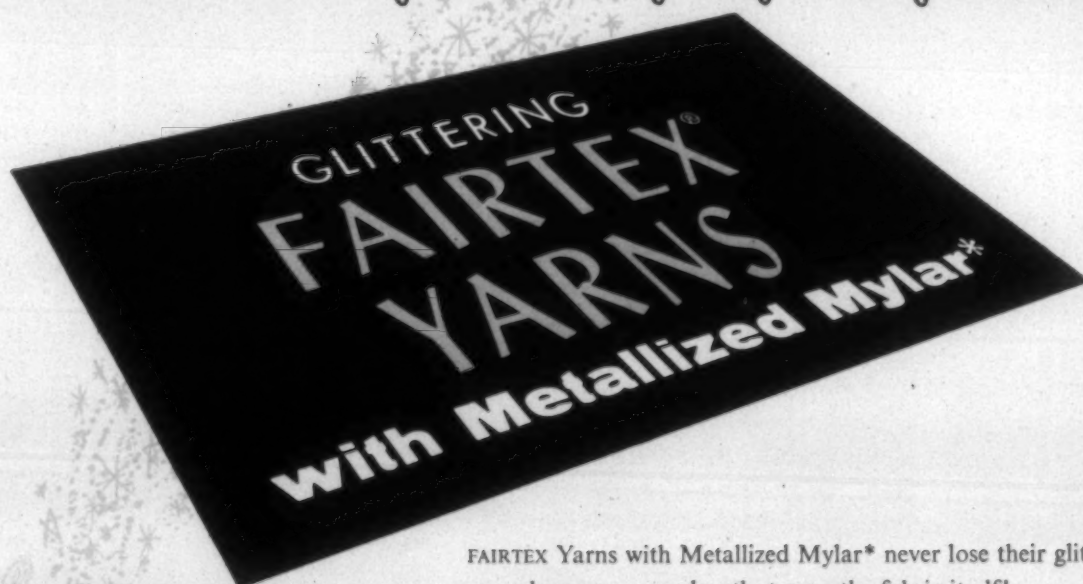


1	16/1
1	(Soft)
Double	
"	1 1/2"
5	2.50
0	1.30
0	24.6
	3"
0	5500
	175
rs.	10 hrs.
z.	11-12
	oz.
	100
approx	.53
approx	
4320	
10	
sides	1200
16	

ETIN

LUSTRE

that lives... for the life of the fabric!



FAIRTEX Yarns with Metallized Mylar* never lose their glittering glamour . . . and outlast even the fabric itself!

Specifically developed for use in automotive fabrics, upholstery and drapery materials, mattress ticking, and hosiery, FAIRTEX

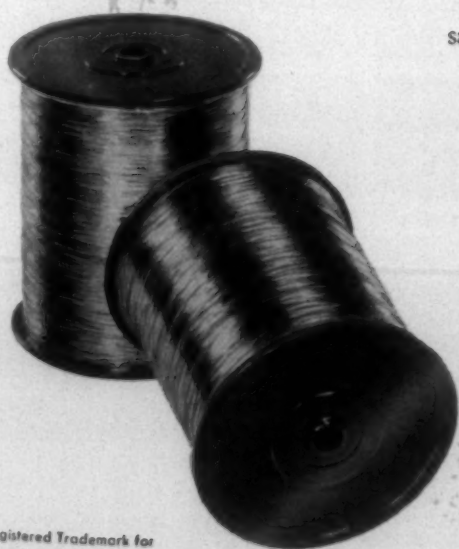
Yarns with Metallized Mylar* are highly heat resistant, can be safely washed, drycleaned or scoured and do not tarnish.

There's no flaking or breaking of metal when you weave or knit with FAIRTEX.

For economy and efficiency, start using FAIRTEX Yarns

with Metallized Mylar* *now* with cotton, wool, silk, linen or synthetics. You get greater yield per pound with

smoother, more pliable and more uniform FAIRTEX Yarns.



...lustre that lives... for the life of the fabric!

FAIRTEX® YARNS

Metallized Mylar* • Metallic • Supported Metallic

FAIRTEX CORPORATION—CHARLOTTE, N. C.

CHICAGO

Napier & Harshman
3555 Peterson Ave.

CHARLOTTE

Lanier, Redmon, Jr. and J. E. MacDougall, Jr.
1808 Liberty Life Bldg.

NEW YORK

Robert Napier
51 E. 42nd St.

*Registered Trademark for
DuPont's Polyester Film

For the Textile Industry's Use

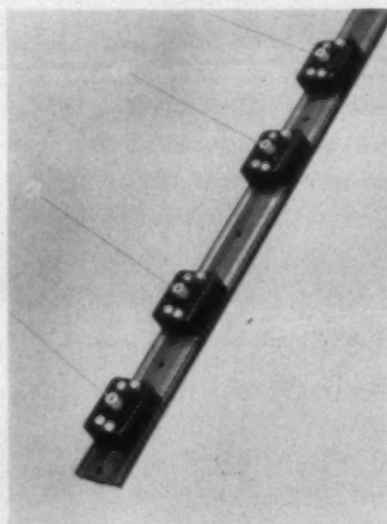
— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Yarn Defect Analyzer

A compact, portable electronic instrument for inspecting, counting and providing quantitative analysis of yarn defects in spinning, winding, twisting, spin draw and other operations is announced by Lindly & Co. Any defects over a pre-determined size can be detected. The new unit reportedly combines high accuracy with speed, convenience and versatility. The equipment rolls quickly and easily into yarn inspection position without stopping, slowing or otherwise disturbing the yarn producing machine. It may be used in any operation where yarn is being packaged, twisted, spun or slubbed. No removal of bobbin, pirn, cone, cheese, etc., is involved. With the analyzer, it is not necessary to control temperature or humidity, or to pre-condition the yarn in any way, Lindly points out. With no waste of yarn, either intermittent or continuous quality control can be maintained.

(Request Item No. D-1)

Roving Frame Stop Motion



Adamstop switches mounted on new-type plastic base (Adams Inc.)

A new model of the Adamstop is now available from Adams Inc. The Adamstop is a unit which instantly detects such roving failures as bobbin run over, plugged flyer, singling, end breakage and other similar failures which are eliminated before they have a chance to cause costly time consuming production problems such as lapped rolls and doublings. Cases where an end has come down between a front roll and delivery to the package, and has knocked down additional ends, are recognized and stopped before a "snowstorm" occurs.

Adamstop consists of a series of nylon

eyelets mounted on two-way switches. If the roving slackens or breaks due to any failure, the Adamstop eyelet falls to either side, actuating the switch which immediately stops the frame. This eliminates faulty production, excessive waste, damage to the roving frame and frees the roving tender of close observation of each frame, it is said. As a result, Adams says, production can be increased, better qualities can be obtained due to fewer ends down in spinning and roving tenders' job assignments can be increased by 25 to 100%.

The Adamstop switches are now mounted on an improved Ancorene precision extruded base bearing the top and bottom inductive bars to which the switches make contact. Switches are spaced so that they are located directly below the centers of the fluted roving feed rolls on the roving frames. A control box, warning light plus a builder motion switch and other accessories complete the Adamstop unit.

(Request Item No. D-2)

Flooring Compound

A new flooring material compounded especially for use in high-speed hand and power trucking locations has been announced by The Monroe Co. Inc. Known as Sternite, it is applied in a 1/4" layer over concrete and is said to form an extremely hard surface that eliminates all wheel drag. It will not depress under wheels, it is said.

Sternite is reputed to contain one of the purest liquid emulsions ever developed, newly-discovered combinations of cements plus specially prepared flint hard aggregate. It is furnished in 250-lb. units ready for mixing. The material is dark brown in color and said to be non-slip, non-porous, lightweight, fire-retardant, wear resistant, easily applied by even the most inexperienced workmen and easily feather-edged. It is claimed to withstand loads of 3,000 lbs. per sq. inch after 48 hours. This is equivalent to a 24,000-lb. load on a truck with four 2" steel wheels. Full Sternite information can be obtained by using this journal's reader service request card.

(Request Item No. D-3)

Repellent And Softener

The addition of Nalan RF to Du Pont's line of durable water repellents and softeners has been announced by the company's dyes and chemicals division. Good wash and wear performance of fabrics can usually be improved still further by co-application of Nalan RF with Zeset S fabric stabilizer or Panalon CR concentrate resin finish and should be employed at a concentration of 2 to 5% depending on the type of hand re-

quired on the fabric. Nalan RF is excellent as a softener and modifier for wash and wear finishes, Du Pont reports.

(Request Item No. D-4)

Aluminum Staple

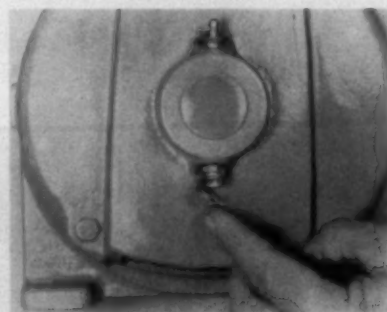
Increased use of aluminum yarn in a variety of fabrics has been forecast by Reynolds Metals Co. following the company's introduction of Reynolds aluminum yarn in staple form. The new short-length fiber has been fully tested to meet market and textile weaving requirements and is now available in quantity to fabric and yarn manufacturers. This is the first workable type of aluminum staple, according to Reynolds, because of its fineness, permanent crimp and ability to blend with cotton, wool and synthetics in any proportion.

Aluminum yarn was successful, previously, only in filament form. This limited its use to precise, repetitive patterns. It is said that with the new staple, which will come in a wide range of colors, random or splash effects can be achieved.

The staple has been tested in Reynolds laboratories for launderability, durability and dry cleaning procedures, as well as for blending and spinnability in conventional processes. It is said to be available in widths as narrow as 1/220". Aluminum yarn has appeared in filament form in women's dresses and suits, draperies, upholstery, blankets, domestic linens, carpets and men's sport coats. Reynolds expects the staple to be utilized to achieve new fabric designs in many of these items. The company says the yarns have a neutral temperature and are extremely soft and pliable because of a thin coat of plastic film.

(Request Item No. D-5)

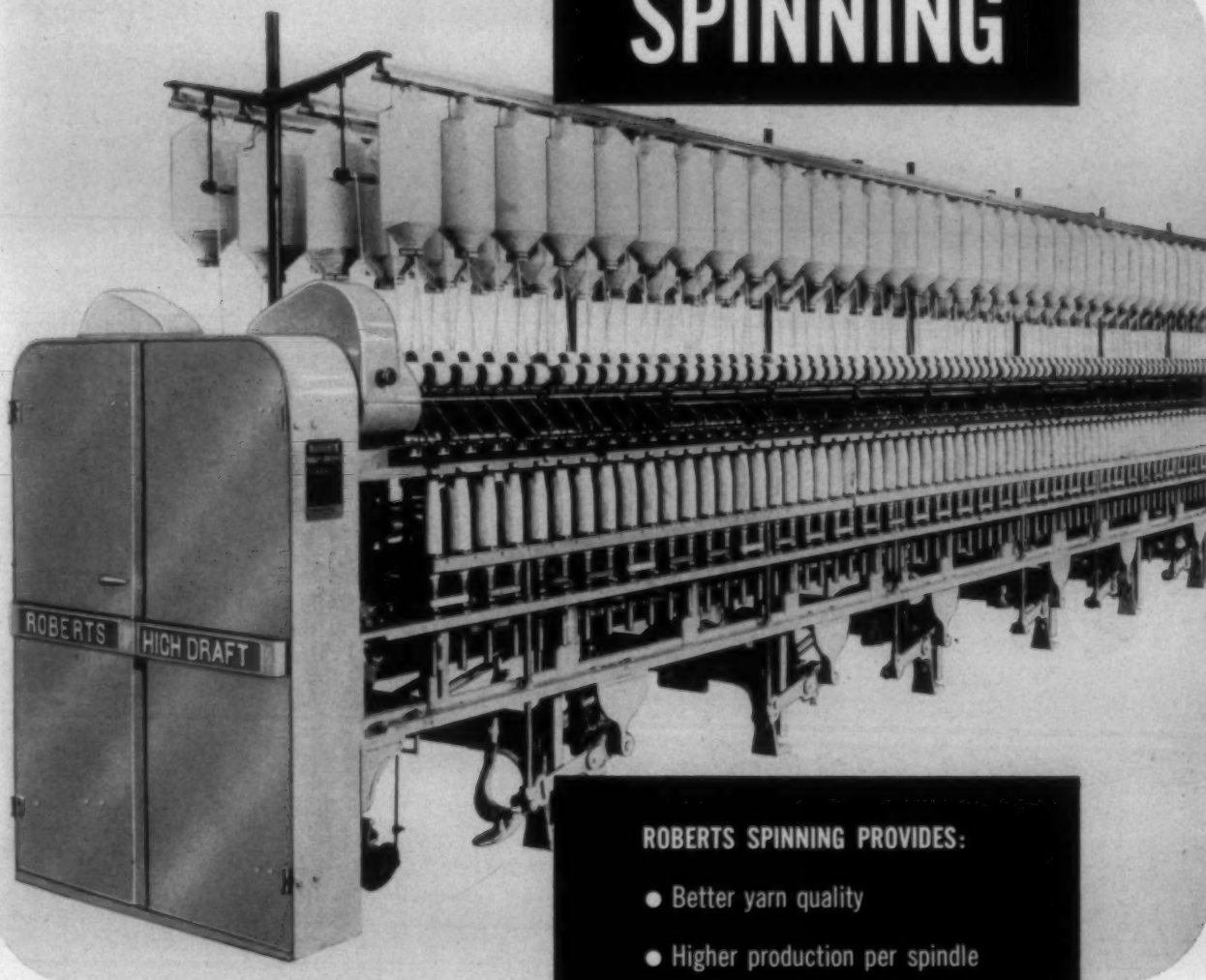
Lubrication Fitting



Keystone RT Fitting (Keystone Lubricating Co.)

A new relief-type lubrication fitting is now available for use on antifriction bearings in motors, machinery, pillow blocks or any ball or roller bearing housing equipped

ROBERTS SPINNING



COMPARE ALL 3

For high production, top yarn quality, and dependability, Roberts Spinning is second to none in America today—and, at the lowest investment per spindle!

2¼ MILLION SPINDLES

In Changeovers and complete Frames—Roberts Spinning has been overwhelmingly accepted by American mills—over 2¼ million spindles now equipped with ROBERTS HIGH DRAFT.

ROBERTS SPINNING PROVIDES:

- Better yarn quality
- Higher production per spindle
- Increased package sizes
- Lower maintenance expense
- Lowest first cost

Available in 39 inch, 36 inch and the new Roberts 25 inch width Frames.

All standard features used on Roberts Spinning Frames can be adapted as Changeovers to your existing frames.

ROBERTS COMPANY

SANFORD, NORTH CAROLINA

OUTPERFORMS — OUTSELLS ALL OTHERS COMBINED!

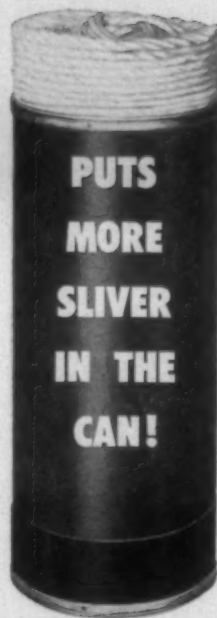


**BOTH HEAD
AND BASE
SWIVEL
FOR
ADJUSTMENT**

**SAVES
LABOR**

**EASIER
TO
INSTALL**

**TAKES
LESS
FLOOR
SPACE**



MCDONOUGH UNIVERSAL CARD COILER

(Patents Pending)

This coiler is its own best salesman. It outsells all the rest put together because it out performs all others. It saves labor by putting more sliver in the can. Its quality construction, including sealed ball-bearings, hardened steel gears, etc., means extra years of dependable service. Ask for free folder with complete specifications.

Let this coiler prove its worth to you in your mill. Have one installed on a

90 DAY TRIAL *Without Obligation*

Since 1890

MCDONOUGH POWER EQUIPMENT, INC.

MACHINE & FOUNDRY DIVISION

MCDONOUGH, GA., U.S.A.

FOR THE TEXTILE INDUSTRY'S USE—

with conventional relief plugs. This fitting is manufactured by the Keystone Lubricating Co. The fitting features a patented, "flip-open" cap that speeds bearing lubrication. The body of the fitting is internally flared to allow free discharge of excess grease, the company says.

Known as the Keystone RT Fitting, it does away with stubborn relief plugs and helps prevent over-lubrication and resultant contamination of windings. According to Keystone's engineers, tests show that these fittings can cut lubricating time 80% or more. Although the cap is held tightly in place by spring tension, it snaps open or shut with the flip of a finger. No wrenches or special tools are needed to open the cap, which swivels to any position so that it is easy to reach. Because it is attached to the fitting, the cap cannot be lost or misplaced.

Additional information on Keystone RT Fittings is obtainable by using this journal's reader service request card.

(Request Item No. D-6)

Strainer

Watts Regulator Co. has offered a new low cost all-brass strainer. Series 137 strainer is designed for applications requiring fine straining of air or gases and is particularly suited for keeping regulators clean. The removable strainer element is indestructible porous bronze which effectively strains out particles .004" and larger. The strainer is available in pipe sizes 1/4", 3/8" and 1/2", and suitable for pressures up to 500 p.s.i.

(Request Item No. D-7)

Procion Dyestuffs

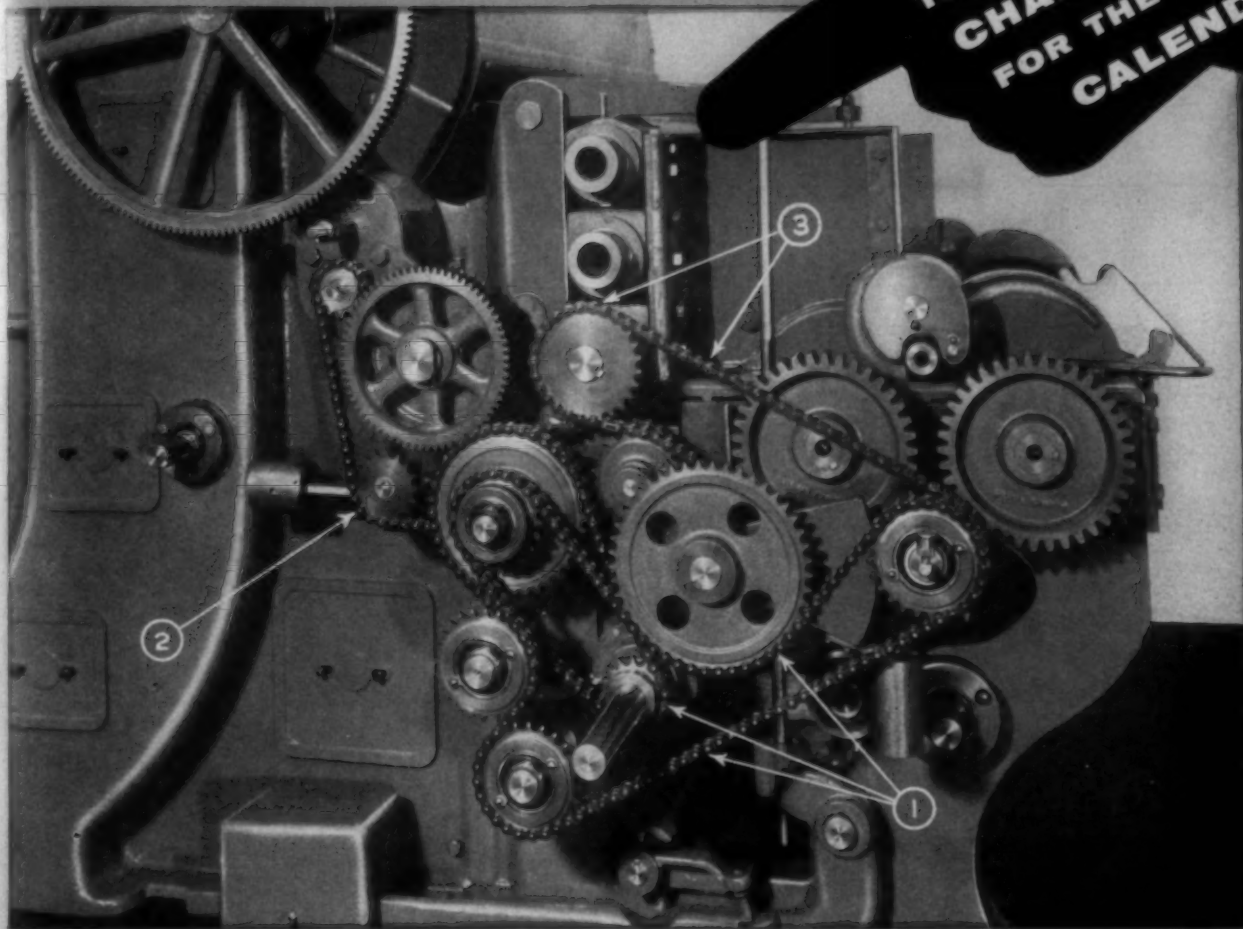
Described as a completely new break in dyestuff manufacture, Procion dyes are of a new type. Results are excellent when Procions are used for dyeing cellulosic fabrics, nylon and allied polyamides or for printing on cellulosic fabrics, wool and natural silk. Their particular uniqueness, however, is said to reside in the fact that when applied to cellulose the Procions achieve high wet fastness by formation of an actual chemical bond or linkage between dye and fiber.

Procions, a development of Imperial Chemical Industries Ltd., are distributed and are to be manufactured in the U. S. by Arnold, Hoffman & Co. Inc., which is an I.C.I. affiliate. Their introduction is said by Arnold, Hoffman to climax more than half a century of dyestuffs research to find a means whereby simple dyes with low physical affinity for cellulosic fibers could be first synthesized, then induced to react with the fiber to produce a very high degree of wet fastness.

Especially interesting to dyers is the fact that reaction between Procions and cellulosic fibers proceeds rapidly under alkaline conditions. This makes it possible to apply them to cottons or linens by an entirely novel cold dyeing technique in conventional dyeing machinery. Hence, the use of Procions assures a significant improvement in control over the dyeing process, together

Need New Pickers?

THE COMPLETE
CHAIN DRIVE
FOR THE
CALENDER



- ① The chain drive to replace the old 14/76-tooth gear drive. A silent drive of great flexibility.
- ② The chain drive from the vertical calender rolls to the draw rolls and screens. A simple, silent drive which provides accurate control of the draft between the screens and draw rolls, and those rolls and the vertical calender rolls.
- ③ The chain drive from the vertical calender rolls to the fluted rolls. A silent flexible drive permitting close control of the draft between the vertical and the fluted rolls.

Note also the roller, on Oilite bearing, which holds the calender rack in place. This replaces the old shoe. The calender rack cross-shaft is on ball bearings—no binding!

**Aldrich Machine
Works**

Greenwood, South Carolina

"HOLYOKE" CALENDER ROLLS



Established
1863

For nearly a century "HOLYOKE" Rolls have been world renowned for sturdy, rugged construction, designed to give dependable, long life.

We are equipped to give service on new and refilled rolls with various types of fillings and densities. Also stainless steel, steel, brass and special purpose rolls.

Our engineers will gladly call to give you the benefit of their long experience making rolls for processing textiles and paper.

Correspondence Invited

**HOLYOKE MACHINE
COMPANY**

CALENDER and EMBOSING ROLLS
for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

FOR THE TEXTILE INDUSTRY'S USE—

with savings in steam and improvement in dyehouse conditions, it is said.

At present, the Procion color range includes a yellow, a blue and a brilliant red. These colors can be dyed in heavy shades, and also give pale shades of high fastness to light and high fastness to washing. Additions to the Procion list of colors are expected in the near future.

(Request Item No. D-8)

Metallic Yarns

Metlon H. T. (high tenacity) Mylar and extra fast color Metlon-with-Mylar have been announced by Metlon Corp. In addition to good washability, heat resistance, durability and dyeability, the H. T. is said to have approximately double strength of Metlon-with-Mylar yarns. The extra fast color Metlon-with-Mylar was specifically developed for the automotive trade and will withstand Fadeometer exposure well in excess of the standards established for light-fastness, according to Metlon.

(Request Item No. D-9)

Saran-Lined Pumps

Availability of saran-lined centrifugal pumps to provide completely corrosion resistant piping systems has been announced by The Dow Chemical Co. The new pumps reportedly permit the handling of a broad range of corrosive liquids. They are a natural development following the wide acceptance of saran-lined pipe, valves and fittings.

The 2 sizes available include 1½" by 1" and 3" by 2" pumps, lined completely with saran and equipped with mechanical rotary-type seals. These special seals are designed to eliminate the high frictional heat failures and resultant leakage problems of packing glands. The seals are easily changeable for adapting the pump to the handling of various corrosive fluids. Both pumps are equipped with seal-cooling systems, and the cooling medium applied may be the fluid being pumped or water from an external source, either of which is channeled back through the pump.

Construction details of the pumps and seals, as well as operating characteristics, can be obtained by using this journal's reader service request card.

(Request Item No. D-10)

Surfactant

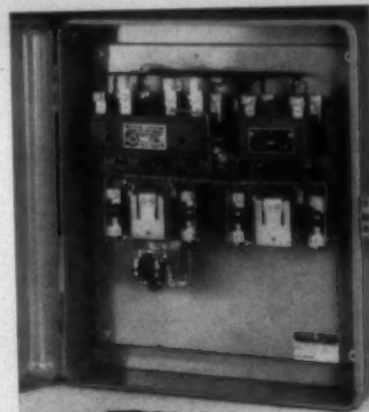
Hart Products Corp. has announced the development of Carbanone A, a nonionic-anionic surfactant which is said to combine the best features of the anionic and nonionic classes of detergents. The product is said to exhibit the excellent solubility, detergent, wetting and dispersing properties of soaps while maintaining the high stability to acids, alkalies and hard water salts characteristic of the nonionic ethers.

Hart Products recommends Carbanone A for all scouring and wetting applications on cottons and synthetics, particularly where hot acid or alkaline conditions prevail, such

as in kier-boiling and carbonizing. It is claimed to have excellent rinseability and, containing no sulfur compounds, a low degree of corrosion on equipment. The product is said to be a powerful dispersing agent for the dispersed acetate dyes. Carbanone A is available as a highly concentrated gell of light color. Samples and technical data are obtainable by use of this journal's reader service request card.

(Request Item No. D-11)

G. E. Starter



New part-winding starter for full acceleration of standard induction motors (General Electric Co.)

A new method of 1-step increment starting for induction motors, which provides reduced light flicker and quieter motor operation during acceleration, has been developed by General Electric Co. Major application of the new starting method is expected to be in locations where power companies require large induction motors be started with reduced kva inrush. Typical uses are air conditioning compressors, refrigeration compressors, fans, pumps and blowers.

The new system, called a two-thirds part-winding starter, will accelerate most loads to full speed on the part winding. This eliminates the second increment of current inrush characteristic of conventional part winding starting.

The starter is easily connected for conventional one-half part-winding starting as well as the new two-thirds part-winding starting. Simple reconnection of the leads of a standard 208-220/440-volt motor to the new control is the sole operation necessary for either type of start, according to G. E. engineers.

Designated CR7050, the starter is available in ratings up to 400-h.p., 600 volts. Its 4-2 pole arrangement makes possible one of the most economical reduced-current starter-motor combinations available. It consists of 2 contactors and a pneumatic time-delay contact. One contactor has 4 poles and the other 2 poles, each contactor selected for half the horsepower rating involved. The time-delay contact, located on the 4-pole contactor, provides the time-delay interval from "start" to "run."

Smooth acceleration and reduced motor

The New Liquid Cationic Resinous Fixing Agent

SOLIDOGEN[®] LT-13

Solidogen LT-13, the new cationic fixing agent, improves the wet fastness of direct and developed colors on cotton and rayon. It is easily applied in the box or pad, or in combination with UF or MF resins, to improve fastness to perspiration, hot pressing and water. It is also effective as a fixing agent when added to the last rinse, after soaping, to prevent bleeding of screen or roller printed fabrics.

In combination with copper salts, Solidogen LT-13 improves the wash fastness of yarns and fibers dyed with selected direct colors. Moreover, it causes very slight or no change of shade of the dyed material.

Write today for complete technical information on this useful new fixative.

From Research to Reality

ANTARA

gaf

ANTARA. CHEMICALS

A SALES DIVISION OF GENERAL ANILINE & FILM CORPORATION

435 HUDSON STREET • NEW YORK 14, NEW YORK

SALES OFFICES: New York • Boston • Providence • Philadelphia • Charlotte • Chattanooga • Chicago

Portland, Ore. • San Francisco • Los Angeles • IN CANADA: Chemical Developments of Canada, Ltd., Montreal

Solidogen LT-13 manufactured by General Aniline and Film Corp. is sold outside the United States under the trademark Fenafix LT.

FOR THE TEXTILE INDUSTRY'S USE—

heating are other advantages of the new starter. Average line current is about the same as for one-half winding starting. The enclosed forms have ample wiring space and all wiring is front connected. Enclosures are available in the following types: N.E.M.A. 1 general purpose, N.E.M.A. 4 water-tight, N.E.M.A. 7 Class 1 Group D explosion-proof, N.E.M.A. 9 Class 2 Group G explosion-proof, and the N.E.M.A. 12 industrial use.

The enclosures have a hinged cover for front mounting of pushbuttons, selector switches and indicating lights. Adequate space is provided on the starter base plate

for the following modifications: control circuit transformer, third phase overload relays, one or more extra contactor interlocks. Combination starters with a fusible or non-fused disconnect or a circuit breaker are also available. The CR7050 is also available as a 3-step part-winding starter with an additional step of resistance beyond the normal 2 steps. (Request Item No. D-12)

Quick Release Nipple For Johnson Joints

A new quick release nipple has been developed by the Johnson Corp. for use with the company's rotary pressure joints. John-

son joints are used on dry cans, calenders and slashers to admit steam or liquids under pressure to rotating rolls or drums. This new quick release nipple, or Q nipple, greatly simplifies the task of connecting joints to journals of such machines.

The nipple consists of 3 parts—a journal flange, a tapered split ring and a nipple flange. The journal flange is fastened to the journal with counter sunk cap screws. It has a recess into which the nipple fits, and threaded studs on which the nipple flange is fastened. The tapered split ring is wedge-shaped in cross section. The 2 halves fit into a recess in the nipple, and bear against the shoulder at bottom of this recess. The nipple flange slides over the tapered split ring, and onto the threaded studs of the journal flange. When the nuts on the studs are drawn up the wedging action between the nipple flange and the tapered split ring exerts a tremendous force to lock the nipple securely in position. The nipple can be disassembled, and joint removed, simply by backing off the nuts.

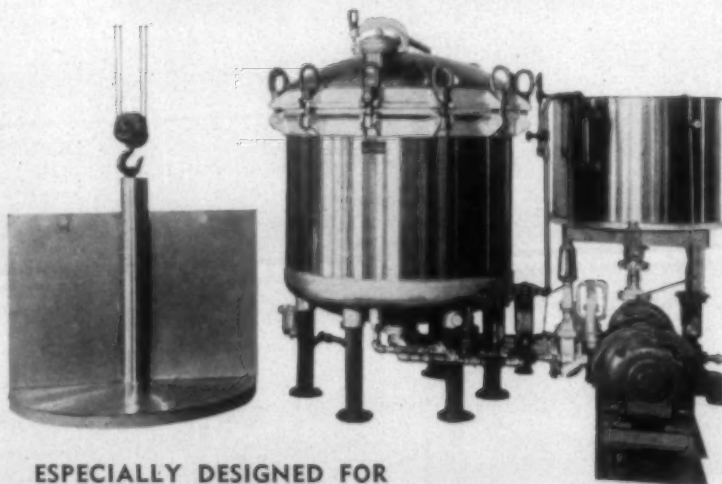
In contrast to the old threaded nipple, this new Q nipple needs only a simple wrench for installation or removal of the joints, Johnson points out. It ends any danger of damaging or crushing the nipple with heavy pipe wrenches. The Q nipple can be furnished on all Johnson joints—the pipe-supported Type J, the rod-supported Type L, the self-supporting Type S, and the Type N which serves where an internal pipe must rotate with the roll. Johnson joints are available in sizes from 1/4" to 8", for pressures up to 250 p.s.i.

(Request Item No. D-13)

RAW STOCK MACHINES

That Let You Control

QUALITY and PROFIT



ESPECIALLY DESIGNED FOR

Today's Newer Synthetic Stocks

Machines with one-way circulation are available in sizes from 1 to 1500 lbs., can be built for use with racks commonly used for cotton or wool stock. Newer synthetic stocks can be dyed more successfully in perforated stainless steel baskets with the dye liquor flowing horizontally 'inside-out or outside-in'. The conventional raw stock machine with one-way circulation has a "downward" flow which causes packing and felting of stock. Machines are available for various capacity baskets for horizontal flow one-way or both-ways, according to your needs. Machines can be built to accommodate all type carriers wherever required. Write for folder giving complete information.

GASTON COUNTY

Pioneers In Automatically
STANLEY

Gaston County Dyeing Machine Co.
Terminal Bldg., 68 Hudson St.
Hoboken, N. J., G. Lindner, Mgr.



A. R. Breen
80 E. Jackson Blvd.
Chicago, Ill.

DYEING MACHINE CO.

Controlled Dyeing Machinery
NORTH CAROLINA

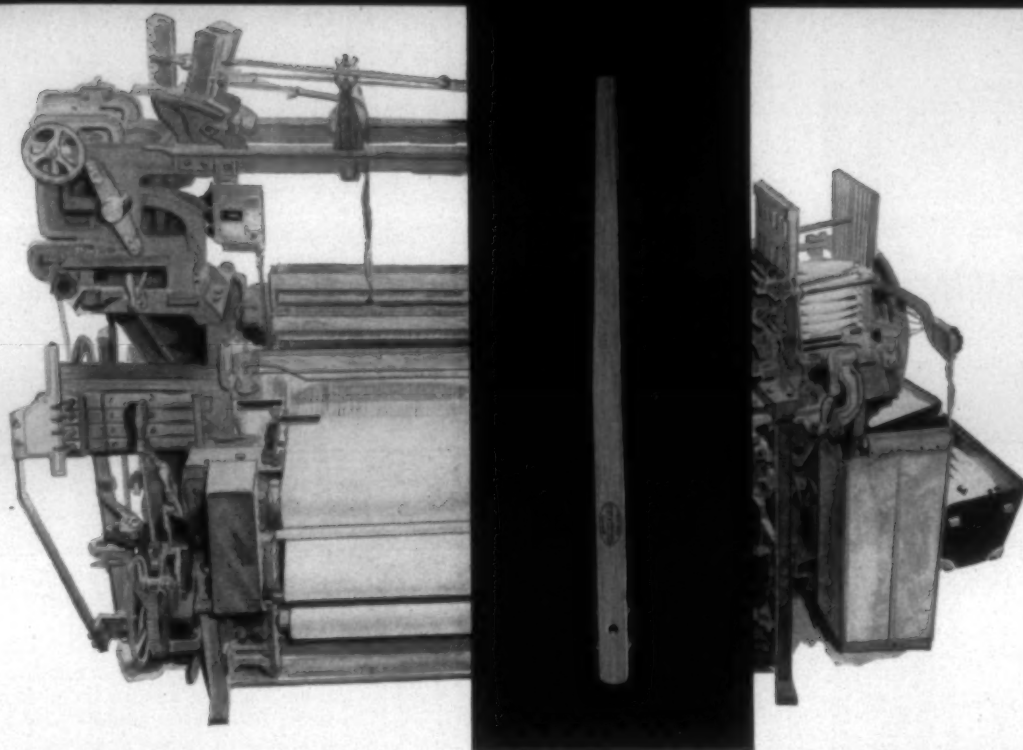
The Rudel Machinery Co., Ltd.
614 St. James St. W. Montreal
260 Fleet St. E., Toronto

Metal Detector

The Radio Corp. of America has announced it has placed on the market a new type of metal detector specially developed for continuous electronic inspection of textile fabrics in production. Designed to protect both product and production equipment, the new textile inspector is so sensitive that it can spot specks of tramp metal as small as a typewritten dot, according to R.C.A. The first production model of the metal detector has been installed to provide continuous electronic inspection of fabrics between batching roll and shear machine.

R.C.A. says the detector is designed specifically to alleviate the textile industry's tramp metal problem which yearly results in the loss of hundreds of thousands of yards of fabrics and costly damage to calender rolls, shearing knives and dies. The inspector is said to provide continuous inspection of strip material traveling at speeds of from 10 to 1,000 feet per minute. It reportedly features adjustable sensitivity and can be pre-set to detect metal particles as small as 0.039" even though deeply embedded in the material under inspection. The unit reacts to all types of metals, magnetic or non-magnetic, and can be installed so that it will trigger any one or combination of alarm systems, the manufacturer states.

The new metal detector features an inspection aperture 64" wide and 1 1/4" high. The aperture will accommodate fabrics up to 60" in width. It utilizes specially de-



THE RIGHT PICKER STICK for EVERY loom application

No matter what you are weaving you are sure to have the best picker stick for your requirements if you select from the STEHEDCO line. Manufactured under complete Quality Control at our modern plant, you are guaranteed the very best grade picker sticks obtainable, at reasonable prices. Ask to have one of our Stehedco Sales Engineers give you the benefit of his wide experience and help you to select the best picker stick to suit your particular needs.

● TEMPERED HICKORY

The best grade of hickory is "Tempered" to assure maximum strength, whip and resistance to warping. This is the traditional picker stick for any loom application.

● REINFORCED DURAWELD

A laminated picker stick, permanently bonded, reinforced by the addition of two veneers of vulcanized fiber. DURAWELD is highly recommended for Draper high speed looms.

● LIDEN

A Light DENSITY stick of laminated beech veneers, LIDEN is ideally suited for all Draper and lighter Crompton & Knowles looms.

● VARDEN

A VARIABLE DENSITY stick of laminated beech with added veneers at the tip and butt ends. A strong, flexible stick specifically designed for box looms with loose pickers.

● MEDEN

A MEDIUM DENSITY stick made of beech veneers, MEDEN is a high quality, extremely tough picker stick capable of withstanding heavy loom conditions.

● STEDEN

A HIGH DENSITY stick of maple veneers with great durability. This is the finest of the STEHEDCO line and is recommended for use where the very best picker stick is required.

P-5707

Stehedco
STEEL HEDDLE MFG. CO.
 PHILADELPHIA 32, PA.
SOUTHERN SHUTTLE DIV.
 GREENVILLE, S.C.
Southern

Other Plants and Offices: Granby, Quebec, Canada—
 Lawrence, Mass.—Greensboro, N.C.—Atlanta, Ga.—Textile
 Supply Co., Dallas, Texas—Albert R. Breen, Chicago, Ill.



JACOBS

ONLY
THE
"Verybest"
IS GOOD
ENOUGH

Jake Jacobs says—
"In top performance
and economy, 'Very-
best' Loom Necessi-
ties are your best
buy dollar for dollar.
Let a JACOBS Ser-
vice Engineer give
you the full story!"



THE BULLARD CLARK COMPANY

JACOBS

**SOUTHERN
DIVISION**
Charlotte, N. C.

**NORTHERN
DIVISION**
Danielson, Conn.

FOR THE TEXTILE INDUSTRY'S USE—

signed coils to produce a high-frequency electro-magnetic field. A distortion of the field creates an electrical signal which is fed to a control unit, amplified and used to trigger the alarm.

(Request Item No. D-14)

Power Sweeper

Better dust control, a wider sweeping path and hydraulic dumping are features of a new power sweeper developed by the G. H. Tennant Co. Called the Model 80, it is a highly maneuverable machine which sweeps a 42" path (53" with sidebrush) and is specially suited for sweeping cotton storage areas, opening rooms, warehouses, etc. Its sweeping capacity is reported in excess of 110,000 sq. ft. an hour in open areas.

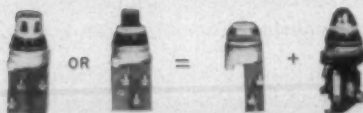
Improved dirt pick-up and dust control are said to result from a specially engineered brush-and-vacuum system. A revolving 42" main brush throws lint, yarns and dirt directly forward into a 12 cu. ft. dirt hopper. This floating type hopper rises when bulky litter is encountered, allowing on-the-run sweep-up of large objects without interruption. A high-volume vacuum fan sucks dust from the sealed-to-floor brush compartment, trapping it in a large (4,200 sq. in. filter area) fabric bag.

Hydraulic dumping is also provided. By pushing a lever, the operator can dump loads of up to 800 lbs. in about 10 seconds. Manual gear shifting is eliminated by a double clutch that permits instant change from forward to reverse, using a single "rocking action" pedal. A second foot pedal regulates sweeper speed. With these foot-operated propelling controls, the operator's hands are free to steer.

Other features: 5-minute brush change; chain gear drive; Ross cam-and-lever steering; 3/16" steel plate frame; air-cooled Wisconsin or Onan engine; 100% ball-bearing equipped rotating shafts; attractive high-visibility paint treatment.

(Request Item No. D-15)

Light-Pushbutton



Illuminated, oiltight pushbutton (General Electric Co.)

An illuminated oiltight pushbutton, combining in one unit the functions of both a pushbutton and an indicating light, has been announced by General Electric Co. The new device reportedly makes possible a saving of approximately 50% in panel control space.

Easily fitted in the same hole and mounting space as existing oiltight units, the device can be panel-mounted or back-mounted, according to G. E. engineers. Designated CR2940UW, the new illuminated oiltight

pushbutton has transformers rated for either 110, 220 or 440 volts, 60 cycles.

The pushbutton unit's transformer is built for extended life and provides the safety of a completely insulated secondary winding. It is potted in permafil compound for additional strength and resistance to mechanical damage or abuse. The strongbox transformer is the same size as the heavy-duty oiltight contact block, which is the same universal contact block used in conventional units.

The new pushbutton unit may be obtained in either guarded or unguarded form. Color caps, which provide all-angle visibility, are available in six colors: red; green; amber; white; blue; clear. The pushbutton uses General Electric's new No. 12, 6-volt bulb which is built to resist vibration and shock.

(Request Item No. D-16)

Eastman Dyestuffs

Two new dyes, Eastman Polyester Yellow RL and Eastman Polyester Dark Red FL, have been added to its series of dyes for polyester fibers by Eastman Chemical Products Inc., subsidiary of Eastman Kodak Co. The addition of these colors brings the total number of dyes in this series to 12.

According to recently completed tests, the new dyes possess the following characteristics: Eastman Polyester Yellow RL produces economical, level shades of bright golden yellow on polyester fibers with very good fastness to light, washing and sublimation. The new polyester yellow may be applied at the boil with a carrier or under pressure. With selected carriers, good union dyeings may be obtained in fabrics containing polyester and tri-acetate fibers.

Eastman Polyester Dark Red FL is a maroon dye particularly suitable for economically achieving dark wine, bordeaux, brown and rubine shades on polyester fibers. In such heavy shades it is said to possess outstanding fastness to washing, dry cleaning, perspiration and sublimation and very good fastness to light. The new dye may be applied at the boil with carriers or under pressure. While certain type carrying agents, such as the phenyl phenols, affect its light fastness, this property can be restored by heat treatment following dyeing. Fabrics containing polyester and tri-acetate fibers can be union dyed with the new dark red dye by the use of selected carriers.

(Request Item No. D-17)

Miniature Clutch

A new electro-magnetically operated miniature clutch designed for use on low torque drive of instruments and miniaturized control mechanisms is announced by Warner Electric Brake & Clutch Co. Designated SF-100, the unit gives instantaneous, positive engagement and release of loads up to 2 lb. in (static torque rating). Axial length of the unit is only 7/8" and diameter is 1 1/8".

No slip rings or brushes are required for the SF-100 clutch since the flange-mounted field is connected through pigtail leads to a 28 or 90-volt d.c. source. In the clutch, torque is transmitted through the rotor to the armature which may be keyed to the

P

ERFORMANCE

records unsurpassed
... backed by millions of
spindles equipped.

N

EWEST

and latest developments
are standard equipment
with Pneumafil.

E

CONOMICAL

to operate ... virtually no
maintenance costs—
a rugged piece of machinery.

U

NLIMITED

types and arrangements of
Pneumafil systems ... engineered
for any fiber or mill condition.

M

ILL MEN'S

practical ideas and valuable
suggestions are incorporated in
all Pneumafil equipment.

A

DVANCED STYLING

and construction blends
in with today's modern
spinning processes.

F

EWER ENDS DOWN—

Pneumafil's greater air quantity
keeps frames cleaner
and free of harmful waste.

I

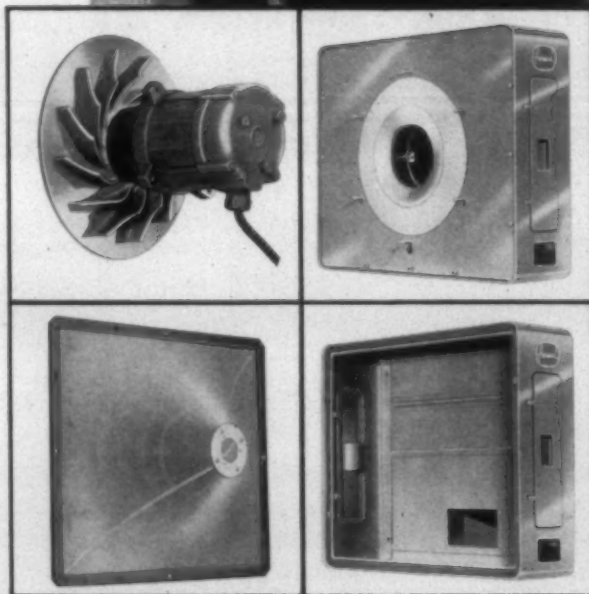
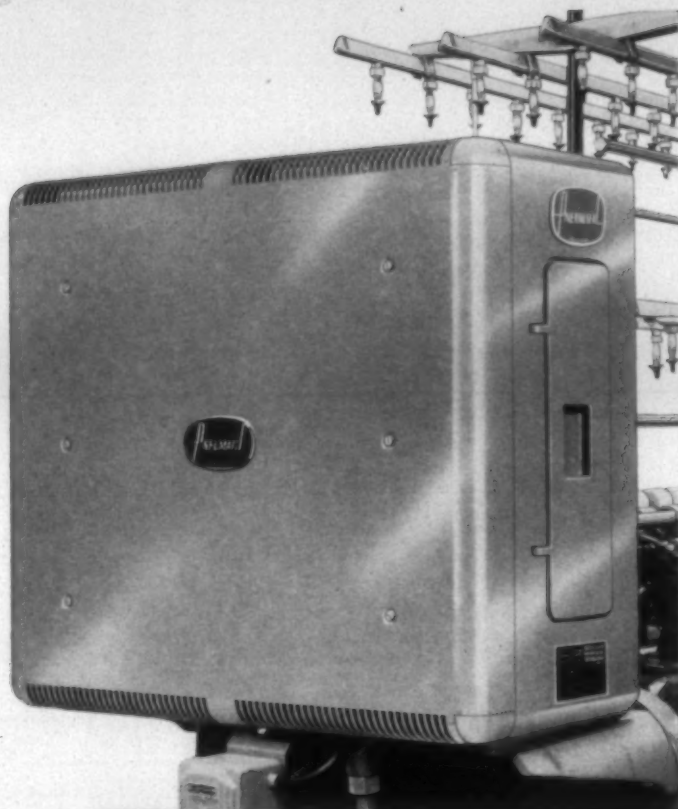
MPROVED YARN QUALITY—

Pneumafil's special "air flow"
pattern catches lint before
it becomes slubs.

L

OWER SPINNING COST—

Pneumafil's positive end pick-up and
superb cleaning means spinners can
operate more sides than ever before!



PNEUMAFIL CORPORATION
CHARLOTTE 8, NORTH CAROLINA
Atlanta, Georgia Needham Heights, Mass.



Pat. & Pats. Pend. — © 1957 Pneumafil Corp.

FOR THE TEXTILE INDUSTRY'S USE—

driving or driven member. Power required is 6 watts maximum. Mounting requirements for the flange-mounted unit are said to be extremely simple. All that is required are 4 holes for $\frac{1}{8}$ " cap screws, equally spaced on a 1 $\frac{5}{16}$ " bolt circle.

(Request Item No. D-18)

Strip Charts

Royson Identicharts, which record on strip charts from a remote point the exact time or sequence conditions occur during processing, have been announced by Royson Engi-

neering Co. The Model RI-1 prints a 6-digit number. It can be adjusted to repeat the same number or advance one number with each printing. The Model RI-2 prints date and time of day to the nearest minute. The Model RI-3 prints a number or letter that is remotely selected for identifying range, chart speed, channel number or other variations that need to be keyed. The Model RI-4 automatically counts and then at some particular time prints the count on demand.

The Identicharts are said to make the job of interpreting charts more accurate after the record has been made. They eliminate the need for someone to watch charts and make identification marks. It is said that they are accurate and reliable and do not

interfere with or obscure the recording procedure. The instruments are available in easy-to-install kit form. Full details and an illustrated folder are obtainable by using this journal's reader service request card.

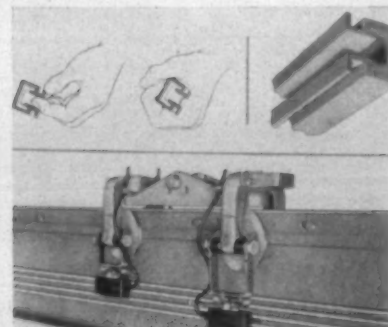
(Request Item No. D-19)

Sandoz Dyestuff

Suitable for automotive and decorative fabric applications, Lumicrease Bordeaux 3LR is a new direct dyestuff which has been introduced by Sandoz Inc. It reportedly possesses extremely good fastness to light, perspiration and crocking. Wet fastness of the direct color is good, it is said, and when aftertreated with Cuprofix, Sandofix and/or resins, this color provides an even greater degree of wet fastness. It gives a perfect acetate reserve, and Lumicrease Bordeaux 3LR also produces satisfactory unions on cotton/viscose blends, according to Sandoz. A leaflet on this dyestuff is available and can be obtained by using this journal's reader service request card.

(Request Item No. D-20)

Shielded Electrification



Kant-Shock shielding for live bus bars
(The American MonoRail Co.)

By covering its standard bus bar electrification with a specially designed polyvinyl chloride extrusion, The American MonoRail Co. reports it can now furnish completely safe electrified systems. Under the name Kant-Shock this shielding absolutely prevents accidental contact with live bus bars. It is impossible for an adult's finger to enter the shield.

A new type sliding shoe collector provides a floating contact throughout a mono-rail system regardless of misalignment due to bent bars or at switches and interlocks. Kant-Shock shielded electrification is mounted in stamped bracket assemblies for live power feed throughout the system at a maximum rating of 600 volts—100 amps. It can be applied in the field, where headroom permits, to existing American MonoRail systems.

(Request Item No. D-21)

Splicing Compound

A new latex splicing compound, Vulcanol adhesive AL-1005, for joining carpet yarns made from nylon, acetate, acrilan, viscose, cotton and wool has been announced by the Alco Oil and Chemical Corp. This quick-setting adhesive created by Alco chemists reportedly sets uniformly and

NON-FLUID OIL

TRADE MARK REGISTERED

THE DRIP-LESS LUBRICANT THAT STOPS BLACK YARN IN THE SPINNING ROOM

Eliminate heavy losses from oil-stained yarn and replacement costs of oil-rotted roll covers and aprons by changing to NON-FLUID OIL. Drip-less and waste-less, NON-FLUID OIL stays in roll necks where it belongs, preventing damage to roll covers and valuable yarn.

NON-FLUID OIL has unique adhesive properties that enable it to stay in the bearings until entirely consumed. Every drop gives full lubricating service . . . and lasts three to five times longer than ordinary oils.

Stop damage by oil stains to goods in process . . . reduce oil costs . . . and check frictional loss of power and wear and depreciation of machines, by using the full-time modern lubricant—NON-FLUID OIL.

Used successfully by 7 out of 10 mills. Write for instructive bulletin and free testing sample.

NEW YORK & NEW JERSEY LUBRICANT COMPANY

292 MADISON AVE., NEW YORK 17, N. Y.

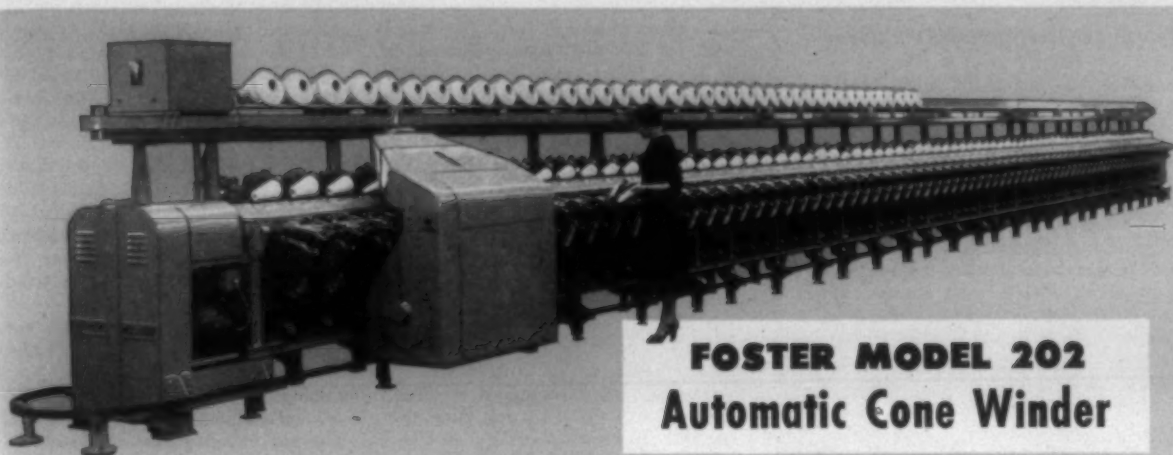
WORKS: NEWARK, N. J.

Sa. Dist. Mgr.: Lewis W. Thomason, Jr. Charlotte, N. C.



Birmingham, Ala.	WAREHOUSES	Greensboro, N. C.
Atlanta, Ga.	Greenville, S. C.	Detroit, Mich.
Columbus, Ga.	Chicago, Ill.	Providence, R. I.
Charlotte, N. C.	Springfield, Mass.	St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.



FOSTER MODEL 202
Automatic Cone Winder

See It in Operation at Knitting Arts Exhibition
Week of April 29 - Booths 82-84 and 99-101A
Just to Left of Main Entrance

ASK FOR PRODUCTION & OPERATING COST

STUDY. We expect to have available at the Show, for the first time, a time and operating cost study on a mill installation. Ask for a copy. You'll be impressed with the increase in production and the decrease in operating cost which this machine effects.

ASK ABOUT IMPROVEMENTS IN DESIGN, including new head end assuring more positive control, central oil mist lubrication, knotters for a wide range of yarns, faster knot tying, and micrometer adjusted slubcatchers.

All operations on the Foster Model 202 are automatic, except the donning and doffing of cones and

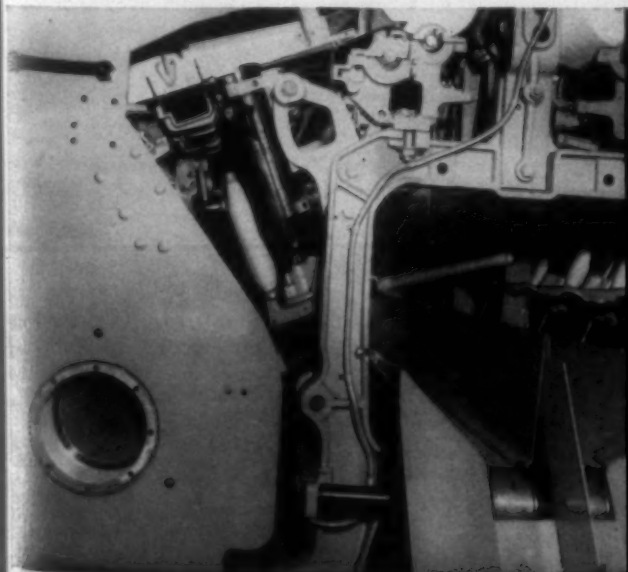
the positioning of full bobbins for the automatic knot tier.

If you don't already have tickets for the Knitting Arts Exhibition, ask us for as many as you want. No obligations.

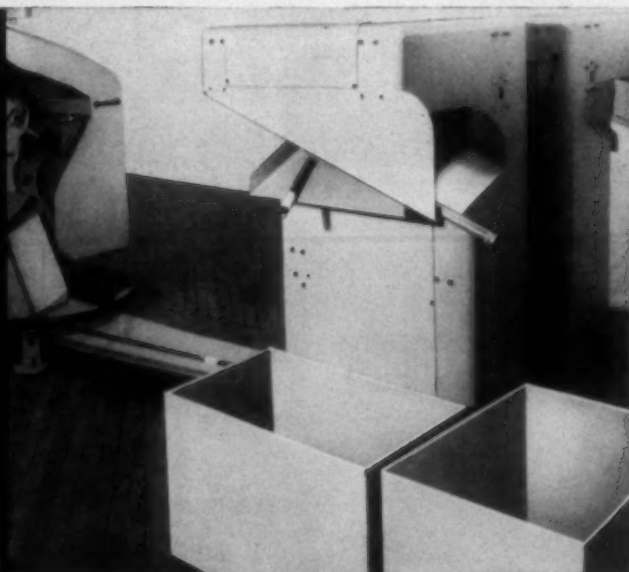
FOSTER MACHINE COMPANY

Westfield, Massachusetts, U. S. A.

Southern Office — Johnston Bldg., Charlotte, N. C. • Canadian Representative — Ross Whitehead and Company Limited, 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ont. • European Representative — Muschamp Textile Machinery Limited, Keb Lane Bardsley, Oldham, England



Showing automatic donning and doffing of bobbins.



Showing automatic sorting of bobbins.

FOR THE TEXTILE INDUSTRY'S USE—

quickly, but not so rapidly as to interfere with the making of a strong, well-formed yarn joint.

The adhesive has been developed especially for use with the newer, non-absorbing synthetic fibers which have been difficult to splice because of their inability to destabilize adequately the older types of latex compounds by withdrawing water. Splices made with the new adhesive need not be more than $\frac{3}{8}$ of an inch in length nor of a diameter exceeding that of the yarn itself, Alco points out. Moreover, it is said they are strong enough to withstand the tensions of various winding, creeling and tufting operations and sufficiently flexible to pass through the needle eye and over the hook at acute angles while the yarn, needles and hooks are in motion. Sold in two parts, the new Alco splicing compound is to be mixed just prior to use in a wet ratio of 84 parts of one component to 16 parts of the other. Under Summertime mill temperatures, the mixed material is stable for about 8 hours; consequently a quantity sufficient for one shift can be prepared at a time.

(Request Item No. D-22)

Cross-Grid Mounting Pad

A compact, new machine mounting pad is being used in industry to help reduce machinery noise and vibration. Called Air-Loc, it is made from B. F. Goodrich Chemi-

cal Co.'s Geon polyvinyl resin. The pad is intended for use with such equipment as textile looms, metal punch presses, electric motor mounts, pumps, machine tools and similar applications.

Actual composition of the pad is Geon resin, sisal and granulated cork fused into an integrated pad. Of course, compounding and processing can be altered to meet the requirements of a special situation. The Geon resin binds the materials and makes the pad resistant to water, oil, grease, most acids and alkalis. The pad is tough and yet remains flexible. Even after repeated loadings to 1,000 p.s.i., the pad recovers 99% of original thickness.

Air-Loc pads are manufactured by Clark-Cutler-McDermott Co. This firm states that Air-Loc will reduce noise and absorb vibrations and shock loads, thus machinery, flooring and building structures are protected. One of the outstanding features of Air-Loc is its integrated cross-grid embossing. This cross-grid surface is not cemented or glued to the body of the pad. It is an integral part of the pad. This means that no cementing or bolting is necessary except in a very few special situations. When machinery must be relocated it is said to be a simple matter to move the pads and adjust them under the feet of the machine in its new location.

(Request Item No. D-23)

Speed Reducers

The American Pulley Co. announces an expansion of its present line, of shaft-

mounted speed reducers to include 4 new 5:1 ratio units. These new units provide a speed range from 60 to 350 r.p.m. with the use of fixed or adjustable-speed wedgebelt drives. They will handle loads up to 25 h.p.

There are four sizes in the new series: 105 for shafts up to 2" diameter; 205 for shafts up to 2 $\frac{3}{16}$ " diameter; 305 for shafts up to 2 $\frac{7}{16}$ " diameter; and 405 for shafts up to 2 $\frac{15}{16}$ " diameter. Units are sold equipped with standard adjustable-torque arms.

Features of these new single reduction units include: compactness, space-saving, no special mounting stand required, ease of obtaining desired speed, low initial costs, ease of installation, internally-ribbed cast-iron housing providing permanent gear and bearing alignment, extra-large oil reservoir, leakproof, friction-free oil seals and continuous splash lubrication, American Pulley points out. (Request Item No. D-24)

Flock Printer

The Vollenweider & Saladin Flock Beamer FO-2 is now being introduced in the U. S. by Cosa Corp. The combined features of this flock beamer provide both increased production and a finer quality of flocked material, it is said. Electro-static flocking and electro-static flock recovery result in an upright pile of uniform density, clear contours and very good definition of design. This beamer operates on a.c. current and will perform without trouble under humid conditions. It will flock all types of textile fabrics.

The electro-static field is created by connecting one pole of the flock beamer to a high-tension electrostat and the other pole to the counter-potential, which is a copper plate beneath the fabric. Voltage of the electrostat potential can be regulated to obtain a maximum of 45,000 volts and 2 amps.

The beamer itself is divided into an upper and lower compartment. An agitator in the upper compartment (flock reservoir) circulates the flock throughout the hopper and prevents any balling up. A mechanical controlling device, fed by this agitator, supplies flock in accurate, pre-determined quantity to the lower compartment where a second agitator feeds it onto a wire screen. Since the screen is connected to the electrostat, it charges the flock as it passes onto the adhesive-coated material. When this flock lands on an area not coated with adhesive, or on an already flocked area, it loses its charge to the grounded fabric. The screen then automatically recharges the excess flock and causes its return to the container. As a result of this recirculation no excess flock can gather on top of previously flocked areas, and contours are given excellent definition.

When charged flock fiber is dispersed from the sieve onto the fabric it automatically assumes the magnetic properties of a north-south relationship. The polar attraction of the counter-potential will align the flock fiber perpendicularly to the path of the material thereby providing an upright pile of uniform density.

(Request Item No. D-25)



These fine aprons are made by the well known Peerless process — by craftsmen with long experience. Compare the following qualities with those of the aprons you are now using.

Finest Leather Prestretched top-grain calfskin

Precision Cut . . . on the latest and most accurate equipment.
Thickness controlled to tolerances of less than 3/1000 inch.

Less water absorption

Send us your specifications and we will be glad to send you samples and prices.

Baker Manufacturing Co., Inc.

Textile Specialties and Materials Handling Equipment
5 Ellendale Avenue • P. O. Box 1195 • Greenville, S. C.

Thermosetting Resins

Hart Products Corp. has announced the addition of 3 new products to its line of thermosetting textile resins. Hartoresin S-50 is a high-solids, stabilized urea-formaldehyde resin syrup. It is claimed that Hartoresin S-50 is useful as a stiffening agent for nylon net materials and as a bodying resin for wash and wear, schreinered, embossed and glazed finishes on cottons. It is said to have higher storage and bath life than unstabilized urea resin syrups. Hartoset F-60 is a modified urea-formaldehyde resin for stiffening and flame-retardant finishes on nylon laces, nets and shoe-cloth. Hartoset F-60 is claimed to give excellent stiff finishes without increasing the flammability of the fabric. It is available as a high-solids syrup. Softolene A is said to be a synthetic wax emulsion for use as a softener in resin formulations for cotton stabilization. It is said to give an excellent hand and an improvement in the tear-strength of the resin-treated cotton. (Request Item No. D-26)

Multiple Feed Oilers

Simple, more accurate feed control is featured in a newly improved multiple feed oiler announced by Trico Fuse Mfg. Co. More accurate control is made possible through use of new tapered feed adjustment screws, the company points out. Snug, leakproof friction fit of these adjusting screws eliminates need for conventional lock nuts. An operator can make quick finger-tip adjustments, eliminating the need for wrenches or getting in cramped or awkward locations with both hands. Heads of friction screws are slotted to permit fine adjustments with a small coin or screwdriver if this method is preferred.

Also new on this multiple feed oiler is a large size filler cap which permits refill from large containers; and special, non-shrinking Neoprene and cork combination cylinder gaskets to provide permanently leakproof reservoirs.

The multiple feed oilers are available with manual or electric solenoid control, and with from one to 24 outlets, each with the new individual friction valve for feed control. Also available in ten-ounce, one-pint, one-quart and 2½-quart capacities with Pyrex glass or shatterproof Lucite reservoirs.

A complete descriptive bulletin (No. 33-A) can be obtained by using one of this journal's postage-free reader service request cards. (Request Item No. D-27)

Shipping Stencil

A shipping stencil, coated with carbon on one side to permit typing or handwriting with business forms, has been developed by Weber Marking Systems, a division of Weber Addressing Machine Co. Inc. Called the Weber Carbon-Cote Tab-On Stencil, it is tabbed over the "Ship-To" area of the order-invoice or bill-of-lading form and prepared as a by-product of the forms writing, and then used to address labels, tags or cartons.

Major advantage of this stencil over other typewriter filled in shipping stencils

As miners of Sulfur Bearing Ores, we are now producing another Basic Sulfur Textile Chemical, TC HYDRO for the Southern Textile Industry.



SPEEDY DELIVERY SERVICE

Our location in the heart of the Southern textile industry, permits us to render overnight truckload service to most Southern textile plants. Small lot shipments are available from centrally located warehouses.



DEPENDABLE SUPPLY

Long a trusted source of Sulfuric Acid, Sulfur Dioxide, Organic Sulfonates and other textile chemicals, we are utilizing our know-how and basic position in Sulfur Chemistry to produce another quality product for the textile industry.



HIGHEST QUALITY

TC HYDRO is a dry, white, free flowing, crystalline powder of uniform size and structure. It is dust-free, assuring highest stability and uniformity.

Phone, wire or write for literature and test samples if desired.



TENNESSEE



CORPORATION

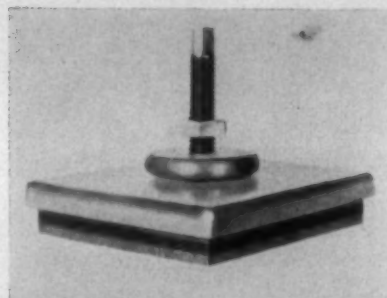
617-629 Grant Building, Atlanta, Ga.

is the carbon coating of the stencil itself, Weber points out. This eliminates the need for a separate carbon sheet between the stencil and the first copy of the form. The carbon is impregnated into the stencil and leaves a clean, ribbon-like print on the form when typed or handwritten. Also, without the extra carbon sheet, the carbon impressions of the Ship-To address on each sheet of multi-ply form set are sharper and easier to read.

(Request Item No. D-28)

Felters Machinery Mount

A new self-leveling machinery mount, called the Level-Rite, has been announced by the Unisorb Division of The Felters Co. It consists of an all-steel base unit with leveling screw and leveling plate, combined with special Unisorb vibration-dampener



The Level-Rite, a new self-leveling machinery mount (The Felters Co.)

pad. The new mount is designed in 7 models with loading ranges from 800 to 7,500 lbs. per unit; and in 4 sizes: 4" x 4", 6" x 6", 8" x 8" and 10" x 10". One unit is required for each machine leg or mounting point.

Level-Rite is said to have 2 special features—an exclusive screw-post design by which a machine is quickly and easily leveled and new compression anchoring. The only action required is rotation of the square top of the screw post to bring machine to level position, then securing lock nut. Once set with Level-Rite, machines stay level without further adjustment, it is said. The second advantage is the ease of anchoring. No bolts, lag screws or cement are needed. Level-Rite eliminates all need for anchor bolts or screws; it is designed so compression provides positive hold, no "walking" or creeping. Machines can be moved whenever and wherever required. In addition, a special Unisorb dampener pad is used which reduces transmitted vibration up to 85%. Unisorb will not deteriorate, is resilient and is impervious to cutting fluids and cleaning compounds.

(Request Item No. D-29)

For the Mill Bookshelf

Electric Fork Trucks

A new 8-page, 4-color brochure describing operational characteristics and mechanical details of its line of electric fork trucks is now available from the industrial truck division of Clark Equipment Co. Four major components of electric trucks, control circuit, power train, hydraulic system and upright assembly are described through photographs, sketches and color cut-away drawings. Advantages of automatically controlled first point of power are analyzed, and Clark's dual field drive motor is defined in terms of user benefits. How quiet operation is obtained through use of double reduction gear train is explained. Features such as the pivoted steer axle and 3 independent braking systems are also treated.

(Request Item No. D-30)

Pipe Fittings Catalog

A catalog which fully describes the Horace T. Potts Co.'s new Speedline corrosion-resistant pipe fittings is now available. The catalog shows the "tangential feature" of these fittings and contains engineering data and specifications. Speedline fittings are said to lower installation costs, allow greater flexibility and provide improved flow conditions.

(Request Item No. D-31)

Dyeing Orlon

The term "whiter, more dyeable," used to describe improved Orlon acrylic fiber staple and tow, does not imply major differences in dye requirements or costs of dyeing, it is reported by Du Pont's textile fibers department. The saturation value of Orlon reportedly has been increased by about 30%, so that a greater amount of cationic or basic dye can be applied, and

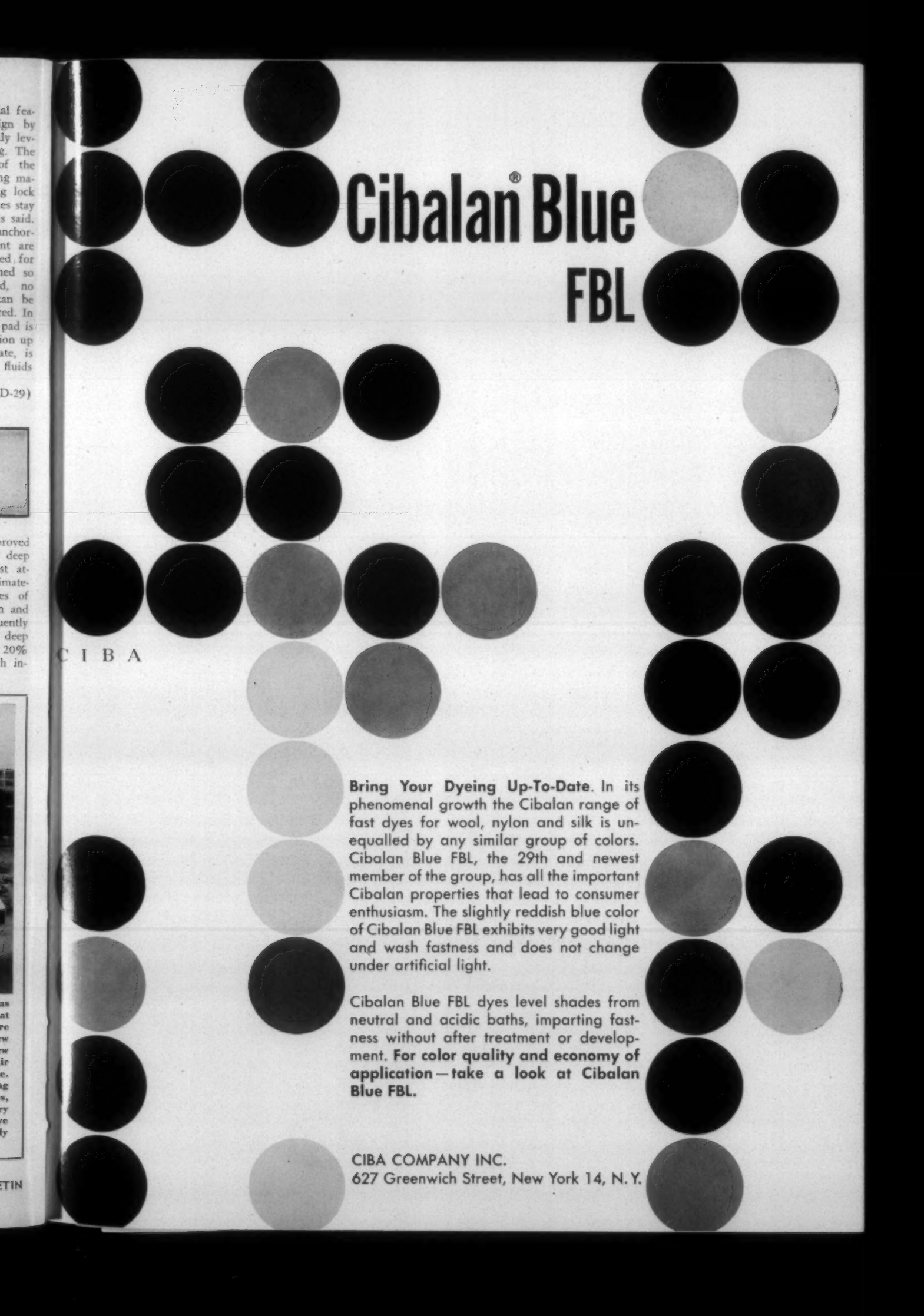
that the rate or speed at which cationic dyes are absorbed is about 30% greater.

There has been no change in any of the other dyeing characteristics of the new merge, Du Pont states. Its dyeability with disperse (acetate) dyes is unchanged. Its resistance to staining by either acid or direct dyes is the same or slightly better and its receptivity for various finishes is unchanged, it is said.

Du Pont points out that the improved dyeability permits better results in deep shades, particularly when the highest attainable dyeing temperature is approximately 205°F. Richer and deeper shades of black, navy, maroon, cordovan, brown and hunter green can be obtained, frequently with reduction in dyeing time. With deep shades, it is possible to save 10 to 20% of cationic dyes in formulas in which in-



SOUTHEASTERN LOOM AND MACHINE WORKS, a division of Abney Mills, has completed its move from Greenville, S. C., to its new, modern one-story plant at Greenwood, S. C. According to Conway L. Still, president of the company, more than five million pounds of inventory, excluding machinery, was moved to the new location by company trucks, by rail and by an independent contractor. The new plant, which has a completely new mechanized foundry including automatic air weight and moisture controls, contains some 138,000 square feet of floor space. Southeastern manufactures looms, loom parts, card and drawing coils, spinning frame pulley spindle drives, centrifugal and gear size pumps, hydraulic presses, electro magnetic loom drives with electronic control, and other special machinery for the textile industry. A recent development of the firm is an individual card drive which features accessibility of all adjustments on the card and also reportedly eliminates the vibration which gives trouble with card flat settings.



Cibalan[®] Blue

FBL

C I B A

Bring Your Dyeing Up-To-Date. In its phenomenal growth the Cibalan range of fast dyes for wool, nylon and silk is unequalled by any similar group of colors. Cibalan Blue FBL, the 29th and newest member of the group, has all the important Cibalan properties that lead to consumer enthusiasm. The slightly reddish blue color of Cibalan Blue FBL exhibits very good light and wash fastness and does not change under artificial light.

Cibalan Blue FBL dyes level shades from neutral and acidic baths, imparting fastness without after treatment or development. For color quality and economy of application—take a look at Cibalan Blue FBL.

CIBA COMPANY INC.
627 Greenwich Street, New York 14, N. Y.

FOR THE MILL BOOKSHELF

complete exhaustion caused waste. No reduction can be made, however, in dye formulas which have been giving complete exhaustion. In addition, it is said the amount of dye retarder used must be increased by 50 to 75% to insure leveling of light shades produced with cationic dyes.

The new material makes significant improvements in beck dyeing of woven piece goods as the result of the increased dyeing rate and increased saturation level. A technical bulletin prepared by Du Pont covering Orlon's improved dyeing characteristics can be obtained by using this journal's reader service request card.

(Request Item No. D-32)

Regrinding Rubber Rolls

Mill engineers will find Rodney Hunt Machine Co.'s newest industrial roll engineering report, entitled *Regrinding Rubber Rolls*, a valuable addition to their industrial rolls engineering file. Dealing with the conditions which make regrinding of rubber rolls necessary, the report discusses modern grinding equipment and the methods by which roll-users who prefer to return their rolls to the manufacturer for regrinding may achieve satisfactory results in refinishing their own rolls. Sources and specifications for several all-purpose grinding wheels are listed. Also included are recommendations as to the diameter, face width and grain coarseness of grinding wheels. Speeds and direction of rotation of both the grinding wheel and rubber roll are given for rolls of different densities. The report provides valuable instructions to aid the operator in making different kinds of cuts, such as roughing cut and the finishing cut, without burning the rubber. Methods for cutting just below hairline cracks, surface damage and oxidation depth are described and recommendations are given for abrasive papers that will give extreme smoothness of finish.

(Request Item No. D-33)

G. E. Pushbuttons

Bulletin GEA-6544, an 8-page, 2-color publication, supersedes GEA-3469 and GEA-5043. It gives features, ordering information, dimension data and application information on standard and heavy-duty pushbuttons. Photos show extent of each line and full page illustration shows features of heavy-duty pushbutton station. Copies are available on request.

(Request Item No. D-34)

Chart For Stainless Steel

A new pocket-sized slide chart on machining stainless steels has been made available by The Carpenter Steel Co. This handy chart measures $9\frac{1}{4}" \times 4\frac{3}{4}"$, and contains a wealth of the latest information on how to machine the popular grades of stainless. One side of the chart gives concise data on turning, drilling, tapping, threading,

milling and reaming operations. It tabulates speeds and feeds, and gives special notes on drilling, tapping, lubrication and welding. The other side shows relative workability of stainless steels in a wide variety of operations including blanking, deep drawing, stamping, forging, heading, roll threading, welding, etc. An inserted slide moves to show, at a glance, the machining data desired. (Request Item No. D-35)

Induction Motors

A new bulletin, GEC-1420, has been released by the General Electric Co. The 4-page, 2-color bulletin contains application data on drip-proof and enclosed polyphase induction motors, 1 to 5 h.p.; frames 182-215; 208-220/440, or 550 volts; 60 cycles. The publication includes charts showing single-speed ratings and frame sizes, typical speed-torque curve, starting torque values and starting and full-load currents. Cutaway drawings point out construction features. Dimension data is also included.

(Request Item No. D-36)

Roving Frame Cleaner

Bulletin F-25 entitled *Controlled Air Currents* has been released by Parks-Cramer Co. The descriptive, 4-page bulletin deals with the Type CTFV roving frame cleaner. It can be obtained by use of this journal's reader service request card.

(Request Item No. D-37)

Poly-V Drive

A completely new 112-page Engineering Data Book for the selection and design of Poly-V belt drives has been announced by Manhattan Rubber Division, Raybestos-Manhattan Inc. Generously illustrated, the book contains many useful charts, tables and diagrams along with complete specifications for all drive sizes. The selection of proper Poly-V belts and sheaves for drives of any speed or horsepower rating is made possible, without calculation, by means of the complete, easy-to-use standard drive tables. The book provides complete coverage of both theory and the practical application of the new R/M Poly-V drive, along with numerous illustrated case histories. In addition, comprehensive data on V-belt drives is included, covering drive tables, horsepower ratings, installation instructions and trouble shooting.

(Request Item No. D-38)

V-Belt Bulletin

Simple precautions to prolong the life of V-belts, increase drive efficiency and thereby assure full continuous production are contained in a new 12-page bulletin released by Allis-Chalmers Mfg. Co. The bulletin describes various types of V-belts and tells how to select and match them. It lists 7 steps for the correct installation of belts and offers as many hints for making them last longer. Portrayed are 8 most common causes of V-belt destruction. These include snub break, slip burn, base cracking,

abrasion, oil deterioration, rupture, ply separation and worn sides. Although compiled and published by Allis-Chalmers, information in the bulletin is applicable to all types of V-belts manufactured today.

(Request Item No. D-39)

Mylar Booklet

Du Pont has released a descriptive booklet concerning Mylar polyester film. The booklet answers what are reportedly the most frequently asked questions concerning this product. Included are case histories outlining how yarns of Mylar have made metallics practical in towels, sheets, linens, bedspreads, cottons, woolens, shoes and novelty fabrics. Cost factors and running characteristics are also considered in the booklet.

(Request Item No. D-40)

Davis & Furber Pamphlet

The Davis & Furber Machine Co. releases a monthly booklet having to do with carding. The booklet describes features of Davis & Furber machinery. The March issue reviews 4 eras in carding and presents the closing article of a series on card covers and side boards. (Request Item No. D-41)

High-Temperature Dyeing

A bulletin entitled *The High-Temperature Dyeometer* has been made available by American Cyanamid Co. The bulletin was researched by Dr. Fred Fordemwalt and Ralph Stanziola and is said to be useful in studying many reactions at different temperatures. It is also said to be particularly adapted for obtaining quantitative dyeing data at high temperatures. This work illustrates how deeply interwoven our modern industrial life has become and how great is the need for a free-flow of information between supplier and customer for the well being of both.

(Request Item No. D-42)

Winding Booklet

A new booklet has been made available by the Universal Winding Co. The material deals with getting the most from winding. The 4-page booklet covers how to switch from pineapple coning to tubing and how to make cones on a ring twister.

(Request Item No. D-43)

Displacement Lubricators

Complete instructions for servicing and operating large displacement lubricators actuated by a moving machine element are included in a 2-page, 2-color service instruction sheet offered by Bijur Lubricating Corp.

The instruction sheet describes the Type G fully automatic lubricator, a piston pump which can be mounted in a reservoir or sump in the machine. Oil volume is fixed by the original pump setting and discharge frequency is determined by operation of the machine. Large photos of the vertical unit, closed filter unit and horizontal unit

types are shown, as well as 16 types of Bijur Meter-Units. Four specification tables detail hose fittings, tubing, compression fittings and junctions used in Bijur lubrication systems. (Request Item No. D-44)

New Wheel For M.H. Trucks

The advantages of Disowheel, Green Industries' new wheel for material-handling trucks, compared with other wheels currently in use, are outlined in a new brochure recently prepared by the company. The 2-color bulletin, 4 pages long, describes, verbally and pictorially, Disowheel's superiority in load capacity, resilience, durability and reduction in truck power consumption. A copy can be obtained by using one of this journal's reader service request cards. (Request Item No. D-45)

Cotton Study

Effects of chemical modification on the physical properties of cotton are reported in a series of papers now being published by research workers at the Southern Utilization Research and Development Division of the Agricultural Research Service, U.S.D.A.

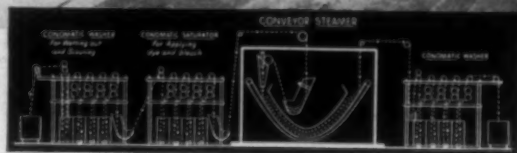
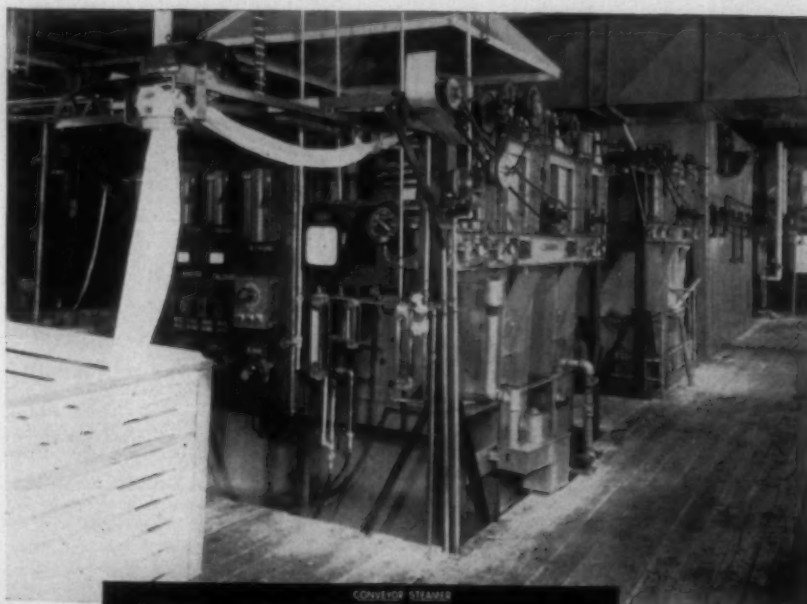
Growing importance of the chemical modification of cotton to give it improved qualities for specific end uses led to the studies which have been aimed at developing information as to the effect of these treatments on other physical properties of the cotton. Five chemical modification treatments being carried out at the Southern division were selected for the studies, including acetylation, mercerization, aminization, carboxymethylation and decrystallization. Dependence of the effects on the variety or growth of the cotton are included in the studies. Samples of 6 varieties were used, and properties reported for bundles, single fibers and yarn.

The first paper published describes the work, the methods used to measure the properties, and furnishes photomicrographs of cross sections of the cotton fibers and values of the physical properties of the untreated fibers and yarns which are used as controls for samples receiving chemical treatments.

Some of these yarns were then partially acetylated and their properties and those of the component fibers studied. Results are reported in the second paper. Averages for breaking loads and tenacities of the fibers were decreased while their linear densities and secant moduli were increased. Breaking loads, linear densities and secant moduli of the yarns were increased; elongation at break was decreased, while tenacity remained essentially unchanged. A third paper on the effects of mercerization has been accepted for publication. Results of studies on cottons given the other treatments mentioned are to be published.

Single copies of *Physical Properties of Chemically Modified Cottons. Part I: Properties of the Untreated Cottons.*, and *Part II: Effects of Partial Acetylation*, can be obtained without cost from the Southern Utilization Research and Development Division, 1100 Robt. E. Lee Blvd., New Orleans 19, La.

ANOTHER PROCTOR CONTINUOUS BLEACH RANGE AT WORK FOR P. H. HANES



The second Proctor Continuous Bleach Range—recently installed at P. H. Hanes Knitting Company of Winston-Salem, N.C.

This Proctor Continuous Bleach Range was put into operation at the P. H. Hanes Knitting Company of Winston-Salem, N.C., early this year. The Hanes management was so impressed by the outstanding performance of their first Proctor Range that they turned immediately to Proctor when additional capacity was needed.

Like so many other textile manufacturers, Hanes relies on the name Proctor, for it means dependability, economy and complete processing satisfaction. They know that Proctor equipment means more opportunity for profit.

- Re-runs eliminated
- Operating speeds up to 150 yards per minute
- Cost savings up to \$11.00 per 1000 pounds bleached
- Amortized in 1½ years
- Eliminates sorting of batches for cutting room
- Insures cloth of excellent hand, whiteness, uniformity, shrinkage and absorbency
- Tremendous savings in water consumption
- Saves space—easily arranged to suit your plant.

Stop in and visit us at Booth #557 at the Knitting Arts Show at Atlantic City, N.J., April 29 to May 3.



PROCTOR & SCHWARTZ, INC.

Philadelphia 20, Pa.

Manufacturers of Textile Machinery and Industrial Drying Equipment

Serving The Textile Industry

Hartford Machine Screw Building Plant In S. C.

The Hartford Machine Screw Co. of Hartford, Conn., is building a 20,000-sq.-ft. plant on the outskirts of Greenville, S. C. Capital investment and equipment will reportedly cost more than \$400,000 and some 90 persons will be employed. The company makes ball bearing spindles for spinning and twisting, among other products. The construction work is being handled for Hartford by The Daniel Construction Co. of Greenville.

Curtis & Marble Buys Hermas Textile Division

The textile machinery business of Hermas Machine Co., Hawthorne, N. J., has been acquired by Curtis & Marble Machine Co., Worcester, Mass. Plans call for removal of the physical inventory of raw stocks of materials, fabricated parts, machines and other equipment from the Hermas plant at Hawthorne to Worcester. The new operation

will be known as the Hermas Division of Curtis & Marble and will continue to actively promote the sale of Hermas finishing machinery, supply spare parts and furnish machine repairs and service. The sale did not include the machinery manufacturing and precision machine shop work for industries other than textile, which will be continued by the Hermas Machine Co. in Hawthorne.

McLean Trucking Acquires Carolina Motor Express

Carolina Motor Express Lines Inc., a Class I motor freight common carrier connecting the Midwest with the Southeast, became a wholly-owned subsidiary of McLean Trucking Co. April 1. The acquisition of CMX, as the carrier is commonly known, culminated five years of management and operation of the line by McLean under temporary authority of the Interstate Commerce Commission. The purchase price was approximately one-half million dollars, made up of a cash payment plus a guaranty

to CMX creditors. CMX was an Indiana corporation in the hands of a receiver when McLean took over its management and operation Feb. 18, 1952. The Western terminals of CMX are located in Chicago, Ill., and Indianapolis, Ind. CMX terminals in the Southeast are located in Richmond and Roanoke, Va.; Charlotte, Greensboro, Salisbury and Winston-Salem, N. C. The general offices of McLean Trucking Co. are in Winston-Salem.

Allen Kiers To Be Made By O. G. Kelley & Co.

O. G. Kelley & Co., Boston, Mass., has purchased William Allen Son's Co., Worcester, Mass. The Allen Co. has manufactured top dyeing machines and special bleaching equipment for 80 years. All products of the Allen Co. including repair parts formerly made by the Worcester company will now be made by O. G. Kelley at the company's Boston plant.

Louis P. Batson Co. Named Agent For Filling Fork Stop

Louis P. Batson Co., Greenville, S. C., has been appointed sole selling agent for the Harrison filling fork stop. The stop, which can be used on all looms that have side filling forks, is so designed that if the loom slams with the shuttle in front of the fork it will spring the filling fork off of the slide and consequently not cause any damage to the shuttle. According to Batson, the stops will last indefinitely. Handling sale of the filling fork stops in South Carolina, portions of North Carolina, Georgia and Tennessee for Batson will be Louis P. Batson Jr., Elliott Batson and Lee C. Shook. Covering Virginia and a portion of North Carolina will be Harry L. Cannon, who makes his headquarters in Greensboro, N. C. Joe A. Williams of LaGrange, Ga., will handle sales in Alabama and parts of Georgia and Tennessee.

Geigy Affiliate Buys Aula Chemicals Inc.

Geigy Chemical Corp. has announced that Aula Chemicals Inc., manufacturer of pigment colors for textile printing and dyeing with its office and plant in Elizabeth, N. J., has been purchased by a new corporation with the same name. The new corporation is affiliated with Geigy, and its president is Harry C. Spatz, who is also president of Geigy Dyestuffs, a division of Geigy Chemical Corp.

Geigy plans to utilize the Aula manufacturing facilities to add a line of pigment printing and dyeing colors to the established Geigy lines of azo and vat dyes. Aula's operations at Elizabeth will be continued under the general supervision of Philip R.

1906



1957

50TH ANNIVERSARY—Clinton Corn Processing Co., Clinton, Ia., a leading producer of corn products for the textile industry, marked the official observance of its 50th anniversary April 22. Originally founded to manufacture glucose, the company was organized in 1906 by a group of St. Louis businessmen. The site of Clinton, Ia., was selected because of its location in the middle of the corn belt. The plant that originally occupied 18½ acres today requires a 42-acre site; its six buildings have grown to 86; the payroll of 250 has expanded to 1,500; and its first product, corn syrup, is today only one of 40 produced by the company. In the textile field, Clinton is well known for its modified corn starches, regular pearl starch and Clinco pearl starch, all used in warp sizing. Clinton products widely used in finishing operations include regular pearl and modified starches, regular gum and X-gum, Clintose, No. 70 corn sugar and a number of white dextrans. To aid textile manufacturers in the most efficient application of its products, Clinton maintains a technical staff of 20 chemists and technicians. A special textile laboratory is also maintained at Greenville, S. C., under the direction of C. F. Cline Jr.

Gelzer, formerly of the Geigy Dyestuffs sales staff.

Sales of pigment printing colors produced by the new corporation will be under the direction of the new president, Mr. Spatz. Geigy Dyestuffs will add a pigment color department to its own sales staff, and William Hutz, who was a sales representative for Aula, has joined Geigy to be part of this new department.

Aula will continue to sell its line of Aulabrite colors. Pigment colors sold by Geigy will be under the Geigy trademarks, Tinobrite and Tinolite.

Holt & Inderfurth Firms Named Sales Agents For The McCandless Corp.

The McCandless Corp. of Cuyahoga Falls, Ohio, manufacturer of Denman loom parts, has announced two changes in its Southern sales representation. Karl H. Inderfurth Co. of Charlotte, N. C., has been named agent for the firm in North Carolina, South Carolina and Virginia. Associated with Inderfurth in North Carolina and Virginia is Hayden C. Cobb Jr., and in South Carolina, Bob Beatty. R. E. L. Holt Jr. & Associates of Greensboro, N. C., has been named agent for McCandless in the states of Georgia, Alabama and Tennessee. McCandless is now acquiring a suitable location in the Charlotte area for the building of a warehouse to stock the complete Denman line. Both the Holt and Inderfurth companies will make deliveries to Southern mills from this warehouse, McCandless points out.

Chemstrand To Boost Output Of Acrilan

The Chemstrand Corp. has announced that production capacity of its Acrilan acrylic fiber plant at Decatur, Ala., will be expanded by 50%. The plant, now operating at its full production rate of 30 million pounds annually, will be enlarged to 45 million pounds capacity. The new facilities are scheduled for completion in the first quarter of 1958. Chemstrand is also expanding its nylon plant at Pensacola, Fla., which is scheduled to reach 114 million pounds annual production capacity during 1958.

Cronland Granted Patent On Improved Warp Beam

Blythe M. Cronland, president of Cronland Warp Roll Co. Inc., Lincolnton, N. C., has been granted a patent on an improved high-speed warper beam. The new beams feature: (1) heads—5-ply cross-laminated seasoned hard maple; (2) full support plate—one-piece construction tapered at edges to prevent damage to beams when storing and stacking; (3) plate threaded at its center to head support hub and fastened at its outer edge by 5 tie rods, sandwiching head between disk and head support for positive full support to prevent flexing of head; (4) end head support has secondary larger hub onto which head is positioned giving a larger bearing surface, assuring more accurate concentric positioning of head resulting in better balanced beams and longer life; (5) engineered head support,

either cast iron or aluminum, each stave fastened by 2 countersunk bolts to the head support; (6) internal supports—2-ply cross-laminated hardwood at 90° angle, 2 3/4" thick, each stave fastened by 2 countersunk screws, one screw into each ply of the internal support.

Licenses Offered For Power-Propelled Shuttle

The American Viscose Corp. is offering patent licenses on its new power-driven shuttle mechanisms for looms. Under one of the patents the shuttle is driven by means of a fluid propellant such as liquid or gas. A small gasoline cylinder is on each side of the loom and the shuttle furnishes the compression cycle and actuates the spark for exploding the gas. In another patent the shuttle is driven by solid explosive charges fed to the shuttle propulsion unit by use of a paper tape. The use of a power-driven shuttle is expected to eliminate approximately 35 moving parts on present looms, reduce vibration, increase loom speed and make possible the weaving of wider cloth, according to American Viscose.

Warwick Chemical To Market Syl-mer

The Warwick Chemical Division of Sun Chemical Corp. has signed a license agreement with Dow Corning Corp. for using the Syl-mer name and trademark, and authorizing like privileges among those finishers, converters, mills and manufacturers with whom it normally does business. Syl-mer is a silicone-based finish that renders cotton, wool and synthetic fabrics resistant to water borne stains and wrinkles.

Under terms of the agreement, Warwick plans to market its Norane silicone to Syl-mer licensees, and perform all quality control tests required by the 2 companies. In addition, Warwick may arrange to license other plants that are properly equipped to utilize Syl-mer or supply those now licensed.

Commercial production of the Syl-mer finish began over five years ago. It is based on one of a family of silicones developed about 1942 from quartz rock, a material that resists moisture, heat and cold—the most common wrinkle-causing elements. When properly applied, the Syl-mer finish allows air to pass through the fabric, while the invisible film of silicone that forms around each fiber remains durably water repellent and stain resistant, even after repeated dry cleaning or laundering.

Warner & Swasey Changes Charlotte Address

The Charlotte, N. C., office of The Warner & Swasey Co., Cleveland, Ohio, has changed its address. The new address is 624 Pecan Ave., Charlotte 5, N. C. The telephone number is Edison 2-4149.

General Electric Expands Silicone Products Dept.

The General Electric Co. is constructing a new product and process development laboratory and further expanding other facili-

ties of the silicone products department. Expected to be ready for occupancy in January 1958, the laboratory is part of a \$3 million capital outlay planned for the Waterford, N. Y., plant. More than \$1 million worth of additional facilities were added or nearly completed during 1956. The two-story building to be constructed will provide about double the space now available for laboratories and will be equipped for study of all aspects of silicone chemistry. Nearing completion is a 16,000-sq.-ft. addition which will be used to augment existing facilities for handling and storage of materials as well as to provide additional office space. An integrated silicone production unit, the Waterford plant manufactures basic chemical intermediates and silicone gums, rubbers, resins, fluids, emulsions, greases and specialties for textile finishes and other products.

Edward J. McBride Co. Completes Large Addition

The Edward J. McBride Co. of Philadelphia, Pa., has completed the addition of about 10,000 sq. ft. of floor area. The addition provides about double the area available to manufacturing processes. The McBride Co. manufactures SRM magazine creels, weaving creels, burling tables, warp flanges and metal and wood rolls.

The Dana S. Courtney Co. To Discontinue Operations

A long-time producer of wooden bobbins, The Dana S. Courtney Co., Chicopee, Mass., will discontinue operations as soon as present inventory is run out. The company was formed in 1897. It is reported to have had continuing losses since 1951. The decision to give up the business came after the company was found unable to meet competition. The plant is housed in a 46,000-sq.-ft. building in Chicopee and at one time employed some 120 workers.

Sun Chemical Corp. Moving Offices To New York City

Sun Chemical Corp. has announced plans to move all administrative and executive activities to New York City from Long Island City. The firm has signed a lease to occupy some 42,000 sq. ft. of floor space in the new 34-story building being erected at 750 Third Ave., between 46th and 47th Sts. The move is expected to be made early next year. Sun Chemical is a leading manufacturer of textile chemicals.

Du Pont Changes Name Of Textile Service Section

Du Pont has announced that its Textile Service Section will officially become known as the Consulting Service for Dyeing and Finishing of the Organic Chemicals Department when it moves to new quarters in the Empire State Building, New York City, about May 1. The name is being changed to give a more accurate picture of the department's activity, according to Samuel A. Pettus, manager.



WATCHING

WASHINGTON

[Exclusive and Timely News from the Nation's Capitol]

Congress is looking straight down the throats of crooks in labor as continued study is being given to safeguards and protection of pension and welfare funds. Testimony shows lack of such protection now, and that some funds are being looted as fast as they are collected. A score of fly-by-night insurance companies into which tens of millions of dollars have been poured on promise of future payment of pensions give evidence of such funds being "hopelessly insolvent."

While legislators carefully say "only a small segment of unions are involved," they do not name any union not involved. There are some that are not, but legislators are evidently whistling in the cemetery in hoping that the number involved is "just a few." The McClellan Committee has evidence that some funds have never been audited, and records and books have been destroyed.

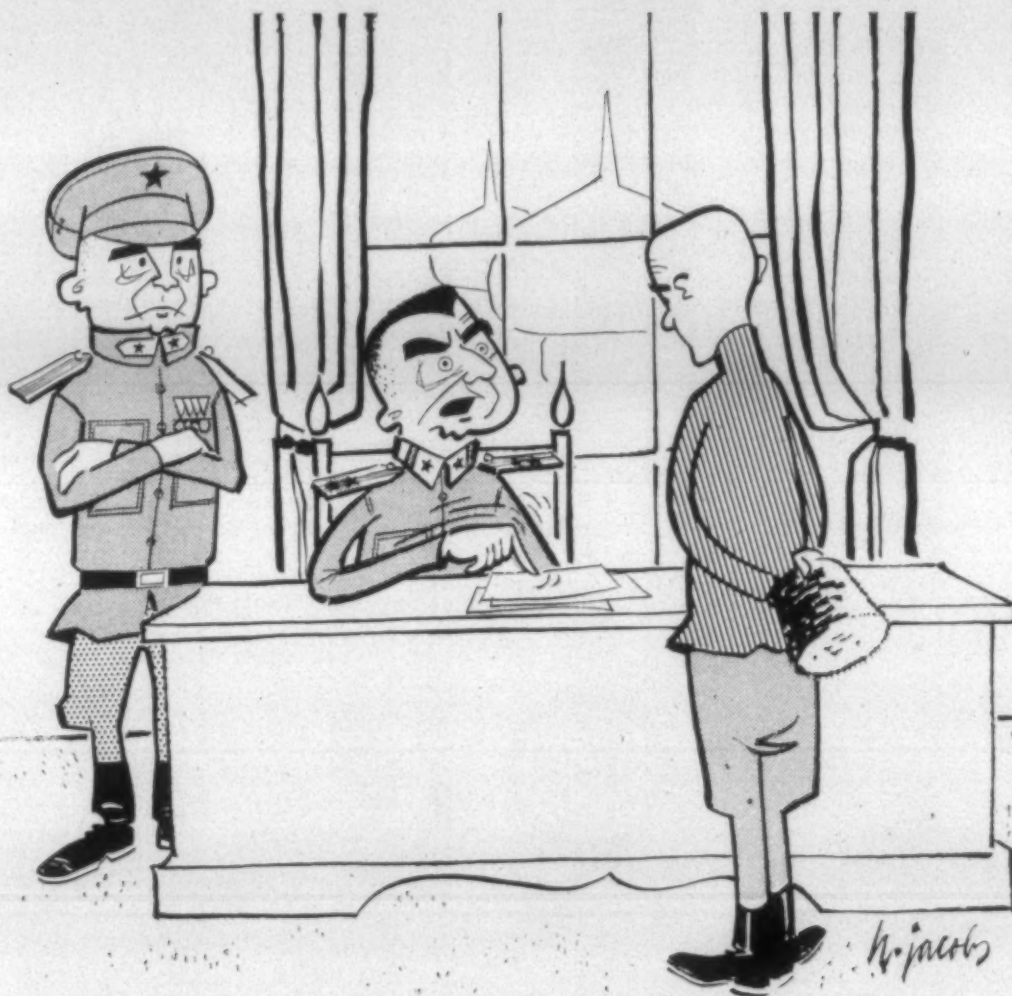
Curiously, business and management in some areas are giving the McClellan Committee very little assistance in its search for facts. The committee is convinced that some employers would rather have things as they are, with pay-offs, rather than risk possible retaliation by union goons. Senator McClellan said that more than 20,000 letters with "important facts" have come in, but few of them from employers. Some of the letters indicate a very thin line between extortion and bribery against competitors.

Dave Beck invoked the 5th Amendment against self incrimination 117 times as he faced the McClellan Committee as a witness. His action spared him the painful ordeal of testifying against himself, but not from the inferences of running to cover when his union management was plastered in committee testimony with heavy charges of theft of funds; charges he let stand without challenge. He stood charged on the spot with "borrowing" \$322,000 from his union without formality of asking for gift or loan. He said the committee did not have jurisdiction to ask him about this money, but he intended to "still retain his union trust."

Senator McClellan openly charged Beck with "thievery," and blasted what he called "this man's conduct" as arrogant and reprehensible. He said no answer had been given to multiple charges of "theft of funds," and of gross abuse in handling union funds. Some \$85,119 in union funds was used to pay personal bills, and \$196,516 to pay for building Beck's home and other buildings. And union records were destroyed in violation of the union's own rules. Beck refused to even identify his own signature on cancelled checks shown to him.

Beck considers the meeting of the A.F.L.-C.I.O. Executive Council to consider his dive down the 5th Amendment hatch as among his lesser headaches. He has more painful things to fret about—income tax charges, for instance. But there was nothing small about the headache which Beck gave the executive council. The odor of misuse and theft of funds, and links with criminals, was too strong, even for A.F.L.-C.I.O. nostrils. "Throw him out," was the theme song on which the session started and ended.

Feeling is general in Congress that the current racketeering investigation will mark the end of an era in labor-management relations. The era began with the Wagner Act, weighted heavily in favor of labor, and giving "freedoms"



"You call yourself a spy? You didn't even learn that Dillard has 15 well equipped divisions
in the Southern part of the United States!"

Dillard **PAPER COMPANY**

GREENSBORO • CHARLOTTE • WILMINGTON • RALEIGH • WINSTON-SALEM • KNOXVILLE • BIRMINGHAM
ROANOKE • BRISTOL • ATLANTA • AUGUSTA • MACON • GREENVILLE • COLUMBIA • SPARTANBURG

1926

"IF IT'S PAPER"

1957

and exemptions from law they had never known before. The Taft-Hartley Law corrected some abuses that were springing up. The problem now is to prescribe rules of honesty and responsibility for unions, and raise barriers against crooks and thieves.

Under consideration is legislation prescribing certain minimum safeguards, and requiring that these be included in all union constitutions. But even the written word will not meet the question in some unions, organized from the top down, and under arbitrary and autocratic rule by a few bosses at the top. Honest elections at all levels are another pressing need, and provision for safe, speedy and fair appeal procedures for union members deprived of their rights. Many members now risk their jobs if they question acts of their union officers.

Several bills are being introduced that would set up accounting and investment standards that would be applicable to all pension and welfare funds. In addition to being five years late, some of the bills would leave control and supervision in the hands of persons who are custodians now, and do not provide for Federal audits. Senator McClellan said his committee will attempt to draft comprehensive bills with adequate safeguards. "Unquestionably," he said, "there has been large scale stealing."

How far rank-and-file members can go in kicking out thieves and crooks in the top brackets of officials is a highly debatable question. The teamsters, who have a grip on the nation's transportation system, are tightly organized from the top down. Employers who are generally organized on a state or district basis, are far too weak to resist encroachments and demands of vast unions set up on a nation-wide basis. Most local unions belong to a district or regional union, which ties in with the big union at the top, to which voices of rank-and-file members do not reach.

A close study of financial data reports submitted by unions to the Labor Department is being made by the McClellan Committee. Scrutiny of the reports is denied to employers and the public. Senator McClellan said he has his own ideas as to whether the reports should be made public, but indicated he has discovered some of them are false. Although the labor law does not prescribe a penalty for a false report, they are sworn to, and the general penalty for perjury could be invoked.

The Federal payroll is increasing at an average of \$946 million a month in this fiscal year, Senator Byrd (D., Va.) told the Senate. Since January it has hit an all-time peak of \$1 billion a month increase. Total civilian Federal employment is now at 2,400,000 persons. He listed 26 programs as new, with proposed spending of \$730 million in the first year, and 15 others are up for expansion.

Congress is moving into one of the hardest fought battles of this session on how far foreign economic aid, under its various names, can be cut. The President wants \$4.4 billion. Some legislators talk of a cut of \$1 billion. Senator Ellender (D., La.) said as far as winning friends or checking the Russians, the whole program has been an abysmal failure. House Member Taber (R., N. Y.) called it a political featherbed for many job holders. Senator Fulbright (D., Ark.) said he has no enthusiasm for the way it is handled.

Foreign economic aid comes in for stinging criticism in Congress, but so far no effectual way to reduce or to stop it has been found. Senator Young (R., N. D.) said: "We have literally thrown away billions of dollars under these programs. Oftentimes they have done more harm than good. The greater reduction in the over-all budget can and should be made in this field. There has been increasing sentiment in Congress year after year to cut these sums, but unfortunately powerful influential international interests, particularly in Eastern states, have successfully prevented savings."

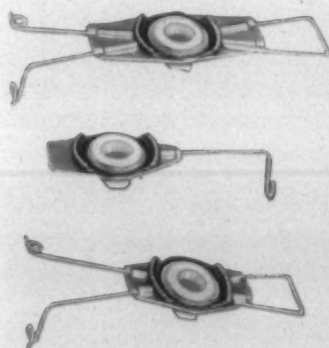
COMPLETE CONTROL

of New Fibers and Filaments with

HERR

*Special Conical Rings
and
Special Flyers*

See us
at our booth
No. 38 & 39
Knitting Arts Exhibition
Hyatt B. Atwood
W. W. Woodard
Robert M. Leach
James McLean



HERR Flyers produce light tensions at high speeds, perfectly balanced for accurate yarn control and reduced vibration.

Having problems with new fibers? Don't waste time experimenting. New physical characteristics of the fibers require changes in the processing equipment to attain best results. Call Herr for the best Conical Ring and Traveler combination to give you complete control of new fibers and filaments. Write for information today!



There is a HERR Conical Ring for the spinning or twisting of any yarn.

HERR Manufacturing Company, Inc.

312 Franklin St., Buffalo, N. Y.

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON, FIBERGLASS AND BLENDED YARNS OF ALL TYPES

textile bulletin

Editor JACK KISSIAH
 Associate Editor GUS GUGGENHEIM
 Associate Editor ANDREW HEWITT
 Technical Editor THOMAS D. EFLAND
 (Associate Professor, Weaving and Designing Dept., Clemson
 College School of Textiles, Clemson, S. C.)
 Inquiry & Reader Service EMILY KERNS

TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable

MEMBER: Business Publication Audit of Circulation and National Business Publications Inc.

TEXTILE BULLETIN IS PUBLISHED MONTHLY BY

CLARK PUBLISHING COMPANY

— Offices and Plant: 218 West Morehead Street, Charlotte 6 —
 P. O. Box 1225 • CHARLOTTE 1, N. C. • Telephone ED 3-3173

JUNIUS M. SMITH President and General Manager
 F. R. CAREY Vice-President and Eastern Manager
 (P. O. Box 133, Providence, R. I.—Telephone TUrner 4-9824)
 MARGARET L. ROBINSON Secretary-Treasurer
 R. S. KENDRICK Advertising Representative
 (1430 Clairmont Rd., Decatur, Ga.—Telephone CRescent 4577)
 DONALD E. ROBINSON Advertising Representative
 (P. O. Box 438, Greenville, R. I.)
 HENRIETTA Q. MONROE Circulation Manager
 MIRIAM W. SCRUGGS Production Manager
 ROY M. ANGLIN Mechanical Superintendent
 BEN C. THOMAS Field Circulation Representative

in advance, \$1.50; two years payable in advance, \$2.00; one year, Canada, \$3.00; one year, other countries in Postal Union, \$5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

Boycott In Reverse?

A three-inch ad in a recent issue of the *Wall Street Journal* said: "Pickets or no pickets, 4,227 nice people visited the Stork Club St. Patrick's Day. Thanks. Sherman Billingsley."

Now, we've never been too concerned about the number of people who order Mr. Billingsley's 60-cent asparagus or three-dollar chicken sandwiches, but we do have a certain admiration for his stick-to-itiveness when it comes to dealing or not dealing with labor unions. And his situation is merely a minor case in point which can't be considered standard in view of the fact that most of his patrons are understandably insensitive to picket lines.

All of which brings us to the subject we originally had in mind. Everyone has been following the antics of the Teamsters' Union for some weeks now—the various despicable activities uncovered and publicized by the McClellan Committee in Washington. The public has been disgusted.

But, there is a tendency to think that the travails of the Teamsters' Union have been confined to the northwestern part of the United States only. Certainly it has been more prominent in that area, because that is where Beck, Hoffa, Brewster, et al, have been allowed to poach at will.

With the current spotlight on Seattle and Portland, much less attention has been paid to Teamsters' activities elsewhere, particularly in the South. For that reason a lot of people haven't connected tactics of the Teamsters on the Pacific Coast with the standard Teamster practices everywhere the union operates. Have you, for instance, ever heard of Dan Yarborough and his small trucking firm?

North-South Truck Lines, headquartered in Charlotte, N. C., is small potatoes in the trucking business. Its individuality stems not from its size, but from the insistence of Mr. Yarborough on open-shop operations. In essence, the Teamsters came to Dan Yarborough some months ago and said that his truck drivers wanted to be represented by

the union. Mr. Yarborough saw reason to doubt this claim. A Teamsters' official was able to produce about seven signed union membership cards. But Mr. Yarborough, being a rather uncomplicated person, felt that seven out of a possible 30 (the total number of employees) was certainly not a numerical majority. But the Teamsters, using some kind of unexplained mathematical process, managed to add seven and zero and claim representation rights. So they told Mr. Yarborough that *all* his drivers ought to sign union cards or a strike would be called. Mr. Yarborough rejoined with the statement that he would find out for himself. What he found out was that the other 23 or so drivers wanted no part of the union, and he certainly wasn't one to tell them that they had to join the union to keep their jobs.

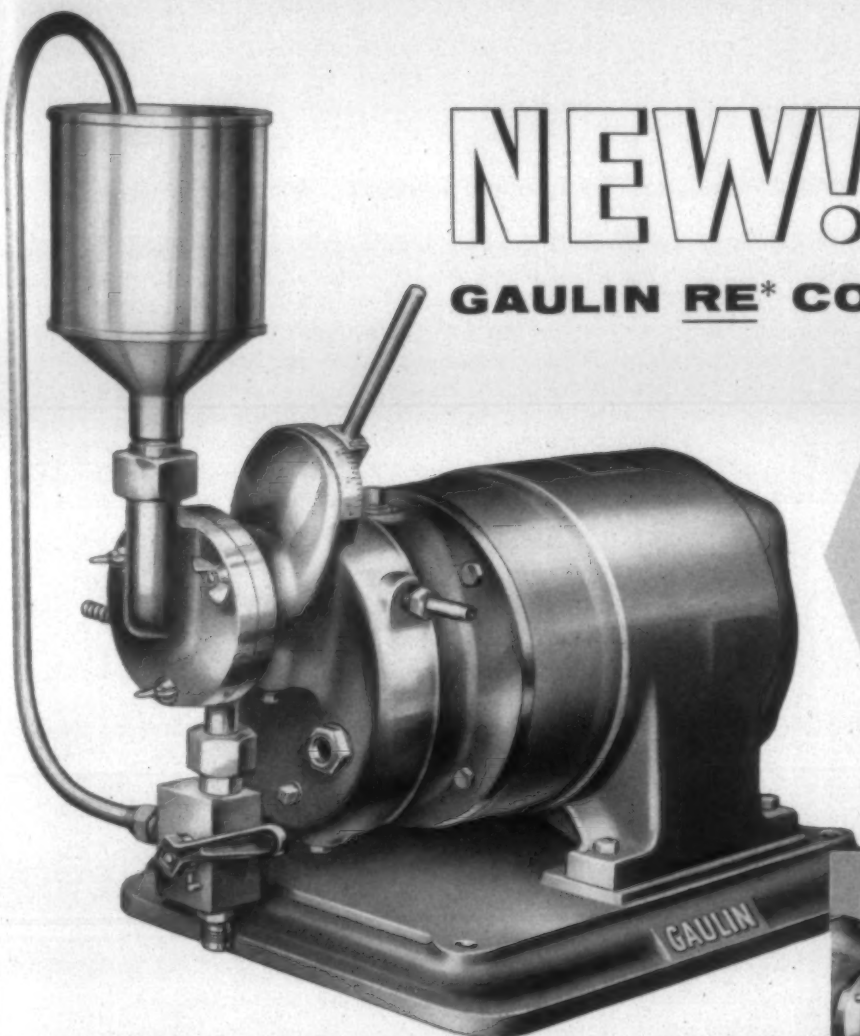
The Teamsters struck. They set up picket lines. Windshields were smashed; tires were slashed. Someone even shot holes in North-South tractor motors with 30-30 rifle bullets. Two non-striking employees were shot at and chain-whipped in a picket line dispute at the company's Charlotte terminal. The two union men involved were subsequently accused and convicted of felonious assault, and their lawyers said they would not appeal.

What, meanwhile, has happened to North-South Truck Lines? Mostly nothing, and "nothing" in this case includes business volume. Unfortunately for the firm, it has a limited franchise operation. It can pick up goods at various points and haul them short distances. But if it gets a shipment destined for New York the goods have to be transferred, at Charlotte for instance, to another trucking line for ultimate delivery, because North-South doesn't operate to New York.

But it isn't that simple. Herein enters the "hot cargo" clause written into the Teamster contracts with nearly all major trucking lines. Employees of unionized truck lines simply do not have to handle shipments turned over to them by non-unionized lines. That stymie, at the moment considered legal, has kept North-South from getting enough business. Mr. Yarborough admits that he is hurting. Neither

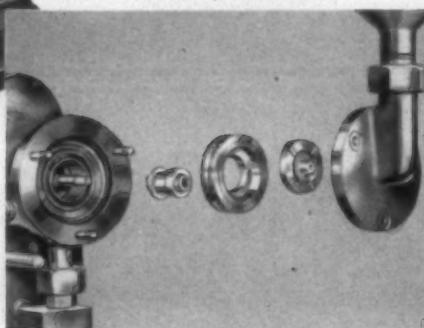
NEW!

GAULIN RE* COLLOID MILL

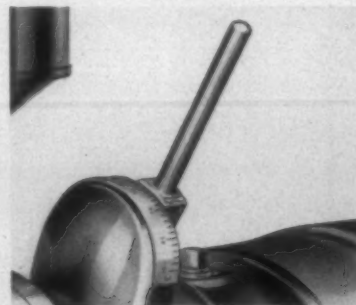


This is the Model 2A. It is shown with accessory equipment — stainless steel 3-way valve, by-pass tubing and tank — for processing quantities as small as 8 oz. Extremely useful for laboratory and research work, it is also designed for production work within its capacity range. Mill body is water jacketed for either heating or cooling.

The Special PLUS Features of the Gaulin RE*



Exclusive! Removable rotor, stator and shaft seal can be disassembled without tools. Shaft leakage is eliminated — There is positive sealing even when processing volatile organic liquids.



Special micrometer adjustment — from $-.001$ to $.040$ — accurately positions the gap opening between rotor and stator. Adjustment of opening can be made at any time whether machine is running or not — allowing continuous control of processing operation.

Here's a brand new concept in Colloid Mills — the Gaulin RE* with removable rotor, stator and shaft seal. The horizontal two-stage design gives maximum capacity per horsepower and unusual processing efficiency. Result: The Gaulin RE* Colloid Mill greatly simplifies operation, can be cleaned without tools, has minimum maintenance, positive shaft sealing and greater production per dollar invested.

Special Materials Available

Rotor and stator can be furnished in stainless steel, tungsten carbide, ceramic, alundum and other special materials. Removable feature makes parts interchangeable.

Wide Range of Capacities

The Gaulin RE* has a capacity range from 0-2600 gph. Model 2A: 0-310 gph; Model 4A: 0-1000 gph; and Model 8A: 0-2,600 — all depending on product, specifications and gap setting.

Send for New Bulletin

Put this new Colloid Mill to work for you! Complete data on the RE* line is available in a special bulletin. Construction details, capacity data for typical products, and rating curves are included. Ask for C-56 from: The Manton-Gaulin Mfg. Co., Inc., 66 Garden Street, Everett 49, Mass.



*patent applied for

he nor anyone else familiar with the situation doubts that the Teamsters are out to break his financial back.

If North-South is ruined, will it be just another small businessman who couldn't compete? What will be the ultimate outcome if the Teamsters chew up and spit out firms which resist them? First, look for a moment at the Teamsters nationally. They have 1,500,000 members, making up the biggest single unit in A.F.L.-C.I.O. Is it conceivable for a moment that A.F.L.-C.I.O. will ever discard the Teamsters? Hardly, when you think of A.F.L.-C.I.O. getting a big slice of the Teamsters take in membership dues. Hardly, when you read the Teamsters constitution. This document is singular in respect to its "reading" clause. Most unions have "non-raiding" clauses which prevent them from snipping at the attainments of other unions.

Let's use one hypothetical case. Suppose the Teamsters, through contacts made by truck drivers making pick-ups or deliveries, manage to organize the shipping department employees of a particular mill. Suppose, too, that the workers in the mill proper are members of one of the textile unions. In this hypothesis the Teamsters do not experience much luck collecting dues from the platform workers. What then? The Teamsters' constitution provides that the union can move into other areas of a plant if they determine that a situation is not conducive to their organizing efforts. This

means simply that the Teamsters would find themselves vying for the attentions of ordinary production workers in the plant. The ramifications of this are obvious.

Or, if the Teamsters were on a temporarily friendly basis with the in-plant union, or if there was no union in the plant at all, the Teamsters can, if they desire to aid and abet, simply order their members not to handle anything being delivered to or shipped by the mill.

There are few who could qualify the statement that the Teamsters Union is the most dangerous organization in today's labor-management picture. This is the union which can tie up at will any industry within weeks. They claim jurisdiction over workers in any plant that moves its products "on wheels," railroads excepted.

Has a mental monster been created? We think not. We do think that Dan Yarborough's fight is the fight of everyone who is interested in seeing a healthy industrial atmosphere maintained.

Legislative Tours: A Continuing S. C. Program

It has been pointed out quite often that industry does not seek any special favors or advantages; and this applies in respect both to the attitude of the local community and to the laws of a state. Industry does not want any laws specially favoring it; it merely wants to be treated fairly, as any good citizen is. But in order to be treated fairly,

TEXTILE INDUSTRY SCHEDULE

— 1957 —

Apr. 26 (F)—SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION (Greenwood Mills as host), Harris School, Greenwood, S. C.

Apr. 27 (Sa)—Spring meeting, TEXTILE OPERATING EXECUTIVES OF GEORGIA, Hightower Building, Georgia Institute of Technology, Atlanta.

Apr. 29-May 3 (M-F)—MATERIALS HANDLING EXPOSITION (concurrent with conference of American Material Handling Society), Convention Hall, Philadelphia, Pa.

May 1-2 (W-Th)—Spring meeting, THE FIBER SOCIETY, Clemson House, Clemson, S. C.

May 1-4 (W-Sa)—Annual convention, COTTON MFRS. ASSN. OF GEORGIA, Emerald Beach Hotel, Nassau, Bahamas.

May 9-11 (Th-Sa)—NORTH CAROLINA INDUSTRIAL SAFETY CONFERENCE, Robert E. Lee Hotel, Winston-Salem, N. C.

May 11 (Sa)—PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION, Catawba Country Club, Hickory, N. C.

May 16-18 (Th-Sa)—Outing, CAROLINA YARN ASSN., The Carolina, Pinehurst, N. C.

May 20-25 (M-Sa)—NATIONAL COTTON WEEK (sponsored by National Cotton Council of America).

May 28-29 (Tu-W)—Industry-wide market research conference (sponsored by National Cotton Council of America), Washington, D. C.

May 30-June 1 (Th-Sa)—Annual meeting, SOUTH CAROLINA TEXTILE MFRS. ASSN., The Cloister, Sea Island, Ga.

June 7-9 (F-Su)—Annual outing, PIEDMONT SEC., A.A.T.C.C., Mayview Manor, Blowing Rock, N. C.

†June 7-9 (F-Su)—Annual outing, SOUTHEASTERN SEC., A.A.T.C.C., Radium Springs, Ga.

June 20-22 (Th-Sa)—Annual convention, SOUTHERN TEXTILE ASSN., Ocean Forest Hotel, Myrtle Beach, S. C.

*June 21-22 (F-Sa)—Annual meeting, SOUTH CENTRAL SEC., A.A.T.C.C., Lookout Mountain, Tenn.

Sept. 4-6 (W-F)—Fall meeting, THE FIBER SOCIETY (joint meeting with British Textile Institute), Statler Hotel, Boston, Mass.

Sept. 12-13 (Th-F)—Annual meeting, CARDED YARN ASSN., The Cloister, Sea Island, Ga.

†Sept. 14 (Sa)—SOUTHEASTERN SEC., A.A.T.C.C., Harmony Club, Columbus, Ga.

*Sept. 20 (F)—SOUTH CENTRAL SEC., A.A.T.C.C., Hotel Patton, Chattanooga, Tenn.

Sept. 27-28 (F-Sa)—COMBED YARN SPINNERS ASSN., The Cloister, Sea Island, Ga.

Sept. 28 (Sa)—PIEDMONT SEC., A.A.T.C.C., Hotel Barringer, Charlotte, N. C.

Oct. 2-3 (W-Th)—CHEMICAL FINISHING CONFERENCE (sponsored by National Cotton Council), Hotel Statler, Washington, D. C.

*Oct. 10-11 (Th-F)—Fall meeting, SOUTHERN TEXTILE METHODS AND STANDARDS ASSN., The Clemson House, Clemson, S. C.

Nov. 14-16 (Th-Sa)—National convention, AMERICAN ASSN. of TEXTILE CHEMISTS & COLORISTS, Hotel Statler, Boston, Mass.

†Dec. 7 (Sa)—SOUTHEASTERN SEC., A.A.T.C.C., Dinkler Plaza Hotel, Atlanta, Ga.

— 1958 —

Jan. 27-28 (M-Tu)—Annual meeting, NATIONAL COTTON COUNCIL OF AMERICA, Phoenix, Ariz.

Apr. 10-12 (Th-Sa)—Annual convention, AMERICAN COTTON MFRS. INSTITUTE, Hollywood Beach Hotel, Hollywood, Fla.

May 26-29 (M-Th)—NATIONAL PACKAGING CONFERENCE AND EXPOSITION (sponsored by American Management Assn.), New York Coliseum, New York City.

June 19-21 (Th-Sa)—Annual convention, SOUTHERN TEXTILE ASSN., The Grove Park, Asheville, N. C.

Oct. 6-10 (M-F)—SOUTHERN TEXTILE EXPOSITION, Textile Hall, Greenville, S. C.

†Fall—National convention, AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS, Conrad Hilton Hotel, Chicago, Ill.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

*Listed for the first time this month.

†Tentative listing.

‡Changed or corrected from previous issue.

and not to be discriminated against, it behooves industry as a whole to let the legislature, law-making units and other regulatory agencies know something about it first hand, what it is doing and what, if any, its particular or special problems are. That, in the final analysis, is only common good judgment.

Probably no better job of this kind has been done anywhere in recent years than in the state of South Carolina, where the textile and related industries are the backbone of the state's economy and furnish by far the great bulk of the manufacturing employment and payrolls in the state. The legislature in South Carolina meets annually, and every Spring now for a number of years the members of the legislature have been taken on a one or two-day tour of some particular county or area where new industrial developments, alone or in combination with the older industries, have been the principal factors in causing or bringing about an improvement in the local economy, and therefore, in the economy of the entire state.

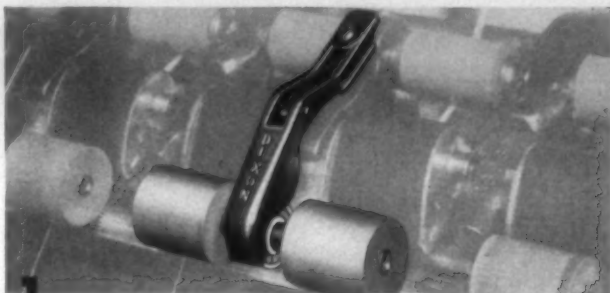
This year the members of the S. C. legislature were taken to Barnwell County for a tour of the new \$10 million woolen plant of Amerotron Corp. near Barnwell, which only a relatively short time ago was the parking lot of some 5,000 persons who lived in house trailers during the peak construction period of the government's atomic energy properties on the nearby Savannah River. The plant, incidentally, is the first new carded woolen mill built anywhere in the United States for a generation.

When the construction phase of the atomic energy project passed and Barnwell County returned to something approaching normalcy, the location there of the Amerotron plant created well over 1,000 sorely needed jobs. The Barnwell site was selected, of course, after exhaustive surveys had been made of other areas. The area of which Barnwell is the center was mainly agricultural country with a farm economy tied principally to watermelons, a rather uncertain crop at best. The building there of one of the world's most modern and up-to-date industrial plants was a bonanza indeed for a county seat and a county which until the middle of the current century was one of the few places in the South which had been more or less untouched by the so-called "industrial revolution" or boom in Dixie.

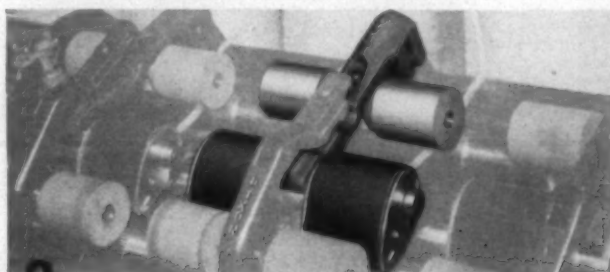
There were, of course, various contributory factors which led to the selection of the Barnwell site, not the least of which had been the establishment, not long before, of the Southeastern region's first two wool combing and scouring facilities in the eastern part of South Carolina, both multi-million dollar projects—the Wellman Combing Co. plant at Johnsonville, in lower Florence County, and the Santee River Wool Combing plant at Jamestown, in upper Berkeley County. Both are in relative close proximity to the port of Charleston, which now has emerged as a principal port of entry for raw wool.

Similarly, the establishment at Sumter, S. C., of the Sumter plant of the Model Dye Co. provided the area with a much-needed dyeing facility to further process the wool tops as they move into smaller or more specialized worsted plants which do not have their own dyeing facilities. In a word, the \$10 million Amerotron plant at Barnwell is but a part of a \$40 million growth of the South Carolina woolen and worsted industry since the end of World War II—and this figure does not include a \$30 million growth of the carpet industry in the state during the same period. Woolen and worsted manufacturing has grown by leaps

2-Step Installation of **DIXON** self-aligning Super Saddle Guide can spread out your investment



1. Install Dixon front roll and saddle combination to eliminate all front roll oiling. Throw away front cap bar blocks, major source of dirt and wear. Save money from the outset, get almost immediate return of full investment.



2. Add Dixon middle and back rolls and saddles to reduce drafting costs still further with elimination of all oiling; lessened cleaning requirements; spin stronger, more even, spotless yarns. Complete your installation this way any time — no parts wasted, no costly elements to throw away.

Proved By Over 100 Leaders

Dixon Saddle Guide assemblies for more than 1,000,000 spindles (Duo-Roth or Casablanca type spinning) have been proved in service by over 100 textile production leaders like Deering-Milliken and Chicopee Mfg. Corp., equipment manufacturers like Saco-Lowell Shops and Whitin Machine Works. Dixon's complete combination costs much less than any competing roll weighting device; eliminates all top roll cap bars and all oiling, is so perfectly engineered that misalignment is impossible.

Write for complete data on
Dixon Super Saddle Guide

DIXON CORPORATION

BRISTOL RHODE ISLAND
Southern Sales: R. E. I. Holt, Jr., and Associates, Inc., Box 1319, Greensboro, N. C.
and Lawyer's Office Building, P.O. Box 321, Greenville, S. C.
Northern Sales: William R. Fox, P. O. Box 380, Providence, R. I.

Manufacturers of Drafting Devices since 1876

IN A FLASH!

we can prove to you

BLUE STREAK

HAIRON CHECK STRAPS

increase production
and reduce costs
meaning

MORE PROFITS FOR YOU



Proven Performance

A Georgia Mill, using BLUE STREAK HAIRON CHECK STRAPS exclusively for one year, reports their strap cost less than in any previous year — even though they increased the speed of their looms during the one-year period! That's because BLUE STREAK HAIRON CHECK STRAPS are cut from Foreign Hairon Leather which has been thoroughly tested and mill proven.

ALSO IMMEDIATE SHIPMENT ON:

ABCO Binder and Front Box Plate Leathers

VELVET Binder and Front Box Plate Leathers

All Types and Shapes of Loom Leathers

Any of our representatives will be happy to call on you—write or phone:

ERNEST D. KEY, SR.	510 Whitehall St., S.W., Atlanta, Ga.
President	Telephone—Murray 8-1483
ERNEST D. KEY, JR.	Monticello, Ga.
Executive Vice-President	Telephone 2121
JULIAN S. HARRIS	232 Altondale Ave., Charlotte 7, N. C.
Vice-President	Telephone—Edison 23055
EDWARD H. BRANCH	1508 Poincianna St., Huntsville, Ala.
Secretary	Telephone—Jefferson 4-6204
ALLAN D. SCOTT	R.F.D. #2, Box 506, Selma, Ala.
	Telephone—Trinity 44118
CHARLES R. DAVIS	705 Forrest Ave., East Point, Ga.
	Telephone—Paplar 1-6781
JOHN C. LONG	P. O. Box 4871, Dallas 6, Texas
	Telephone—Tenison 9416
JAMES D. ELLINGTON, JR.	2075 Dellwood Dr., N. W., Atlanta, Ga.
	Telephone—Trinity 2-4083

ATLANTA BELTING COMPANY

508-510 Whitehall Street, S. W.

Atlanta 3, Georgia

Telephones MUrray 8-1483-4-5

Manufacturers of Leather Belting & Textile Strapping

EDITORIALS

and bounds in the entire Southeast since 1949, representing an increase of well over 50 per cent. But nowhere has the growth been more spectacular than in South Carolina.

Significantly, it is worth noting that the port of Charleston reports that wool imports have almost doubled during the past year. The first three months of 1957, for instance, saw nearly 36,000 bales of wool discharged at Charleston, compared to only 18,500 bales for the same three months period in 1956. The predictions are rather common that in due course Charleston will become the nation's leading wool port. So the members of the South Carolina legislature, in touring the vast Amerotron plant at Barnwell and learning the details of what the burgeoning woolen and worsted industry means to South Carolina and to the Southeast, most certainly were "filled in" or acquainted with one of the most significant and meaningful chapters of postwar industrial development in the region.

On the same tour, the legislators also took a look at some of the modern textile plants and operations in the Horse Creek Valley section of Aiken County between Aiken and Augusta, Ga. It might properly be said that the modern era of textile manufacturing in the South really had its beginning in this area, with the building well over a century ago of the Granite Mill at Graniteville by William Gregg. The solons took a look at both the Hickman Mill and Gregg Dyeing Plant of the Graniteville Co. and the modern Clearwater Finishing Plant at Clearwater.

During a brief luncheon address Lt. Gov. Ernest F. Hollings of South Carolina said that the General Assembly "feels a responsibility to new industry in bringing it to South Carolina and should maintain the state's financial stability and the right-to-work law and laws which make for a healthy industrial climate." Every word of that, of course, is more than true; and a fact which should be emphasized. A fact which we started out to underscore in the beginning, however, is that these annual tours for the members of the legislature give the law-makers an insight into the workings and operations of industry within a state as nothing else possibly could; and it is an idea which might well be adopted by other states in the textile South and elsewhere.

Compared with other Southern states, South Carolina is a relatively small state, both geographically and from the standpoint of total population; yet in the postwar period it has experienced an amazing industrial growth. Actually, in the last few years, the members of the legislature have been taken on tours of industrial areas in nearly or virtually every part of the state. They have seen the surprising diversification of textile and textile related industries in Anderson and Oconee Counties and around Clemson College, S. C.; they have seen first hand the importance, economic and otherwise, of the textile and related industries to Spartanburg County. Likewise they have been conducted on a tour of the industrial plants in the Greenville-Pickens area, and they have seen other parts of the state which fall into the category of industrial showplaces. They have seen the postwar port developments at Charleston and what they mean to the economy of the state.

Yet there are other interesting and progressive sections of the state still to be visited. And even considering the geographical size of the Palmetto State, any concept that the list of areas or counties for the legislators to visit might

inally become exhausted is a false one; this is simply because the membership of the General Assembly naturally changes from year to year, and by the time it should be necessary to go back and start the yearly itinerary all over again, a considerable part of the legislative membership will be new.

These tours, as they have been developed in South Carolina, constitute a first rate idea. A little of the same thing, of course, has been done from time to time in a few other states; but nothing on the scale of the annual event, as it has come to be, in South Carolina. The South Carolina program, or the principle or idea behind it, could well be studied closely by any other states or areas.

Not All People Are Kind

One of our salesman-friends has called our attention to some recent remarks made to the Carolinas-Virginia Purchasing Agents Association by Paisley Boney of J. P. Stevens & Co.:

"Having spent 17 years in selling before switching to purchasing, it has always seemed to me that the successful purchasing agent and the successful sales executive must have the same basic qualifications. The two most important of these characteristics, in my judgment, are imagination and the ability to understand, analyze and handle people.

"Showing interest in and appreciation of our fellow man is just another way of saying, 'Be a human being.' Not all people are kind, considerate and warmhearted by nature. But even the coldest-blooded purchasing agent should take steps to warm his relations with the sales representatives who make regular visits to his office. These gentlemen have a job to do and we are pledged by the nature of our profession to hear their story. We should treat them with respect and courtesy, remembering that they can help us and that a good salesman is a great asset to a purchasing agent. If you are in the habit of being 'too busy' to give a reasonable amount of time to these fellows, then you are too busy to be a purchasing agent.

"To develop a merchandising relationship that will live and grow, an effort should be made to make every interview of value to both the buyer and the seller. Most salesmen today are professional men—the same as most of us—and should be treated as such."

Now the friend who pointed the above out to us has been in the business a long time, and has called on many, many accounts. He is quick to admit—and we to agree—that there's good and bad to be found in both purchasing agents and sales representatives. The difficulty lies in the fact that the "bad ones" don't know—or won't admit—that they are other than what Mr. Boney says they should be.

So take the acid test. Read Mr. Boney's comments again, and again, and again.

In 1853 E. M. Holt, who about 15 years earlier had established the Alamance Mill near Burlington, N. C., purely by accident met a traveling Frenchman, who for \$100 and board agreed to set up and show him how to dye cloth which was being woven in the greige. The operation was performed in an 80-gallon copper boiler that had been used to cook turnips for livestock. Thus were born the famous "Alamance Plaids," which were taken by wagon teams and sold all over the Southern Piedmont Plateau.



PAPER PRODUCTS

From the Nation's
Prime Source of Supply

PROMPTLY EFFICIENTLY
ECONOMICALLY

Our extensive warehousing operations make possible the very real economies and services which we provide our customers. We move thousands of tons of paper products through Henley warehouses each month. Volume buying, efficient material-handling, and modern, highly-mechanized plant facilities—each contributes to the lower-than-average cost of Henley papers. Thus we can say sincerely, we share your problems, not your profits.

IT'S GOOD BUSINESS TO DO BUSINESS WITH A DISTRIBUTOR
... AND IN PAPER, THE DISTRIBUTOR TO DEAL WITH IS HENLEY.

HENLEY

PAPER COMPANY

HIGH POINT

GASTONIA

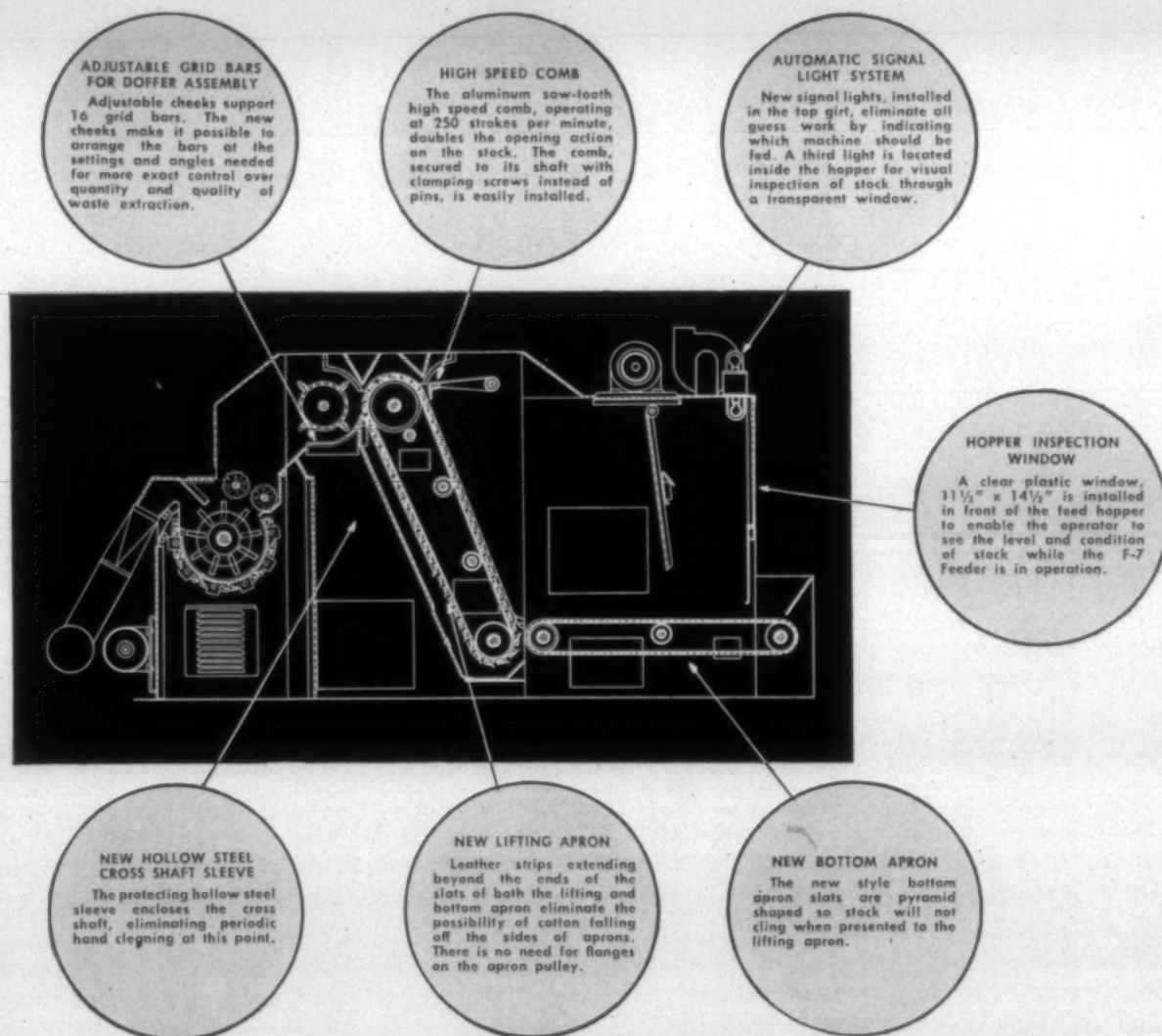
ASHEVILLE

CHARLOTTE

NO NEED TO GAMBLE WITH PROFITS

MODERNIZE YOUR SACO-LOWELL F-7 FEEDERS

NOW WITH THESE **7** NEW SUB ASSEMBLIES



The rising use of machine picked cotton has placed heavy demands on the opening room. In many cases, existing equipment has proven inadequate in coping with the added leaf, stalk and seed fragments. To insure that the first breakup of stock, so important when processing mechanically harvested cotton, will be as complete as possible, we offer these Seven New Component Assemblies for the F-7 Feeder.

The improved breakup with modernized F-7 Feeders makes the major cleaning job far easier for the rest of the Opening and Picking line, as well as the Cards.

SACO-LOWELLIZE TODAY FOR MORE PROFIT TOMORROW



SACO-LOWELL-SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N. C.; Sales Offices: CHARLOTTE - GREENSBORO - GREENVILLE - ATLANTA

A. C. M. I. In Convention

—Votes To Merge With N. F. T.

—Elects Hardman, Jones & Chapman

—Gets Optimistic About The Future

Nearly 1,000 persons attended the eighth annual convention of the American Cotton Manufacturers Institute, April 4-6, in the Palm Beach Biltmore Hotel, Palm Beach, Fla. Here are some of the highlights of that meeting.

THE American Cotton Manufacturers Institute added a pair of potent weapons to its arsenal during its recent annual convention at Palm Beach, Fla., bolstering its forces on the political and economic fronts by: (1) approving a recommendation calling for a merger with the National Federation of Textiles; and (2) approving the establishment of an economics research division within the A.C.M.I. designed to broaden the institute's present statistical reporting program significantly.

The convention delegates also heard F. E. Grier, outgoing A.C.M.I. president, urge the industry to help itself attain the profit level of other American manufacturing industries by modernizing its marketing operations.

In an election of officers, L. G. Hardman Jr., president of Harmony Grove Mills, Commerce, Ga., was elected A.C.M.I. president to succeed Mr. Grier. Elevated from second to first vice-president was Halbert M. Jones, president of Waverly Mills, Laurinburg, N. C. Named second vice-president to succeed Mr. Jones was James A. Chapman Sr., president of Inman (S. C.) Mills. The election of Messrs. Jones and Chapman automatically places them in line for the presidency in 1958 and 1959, respectively.

Also elected were eight new members to the institute's board of directors. They are Stanley W. Converse, president and treasurer of Clifton (S. C.) Mfg. Co.; P. Huber Hanes Jr., president of P. H. Hanes Knitting Co., Winston-Salem, N. C.; J. Spencer Love, chairman of the board of Burlington Industries Inc., Greensboro, N. C.; Leon Lowenstein, chairman of the board of M. Lowenstein & Sons Inc., New York City; D. H. Morris III, president of Geneva (Ala.) Cotton Mills; Robert T. Stevens, chairman of the board of J. P. Stevens & Co. Inc., New York City; Samuel H. Swint, president of the Graniteville (S. C.) Co.; and Robert Train, president of the Bibb Mfg. Co., Macon, Ga.

The A.C.M.I.-N.F.T. merger, which has been in the discussion stage for the past three years, was approved unanimously by the A.C.M.I. board and got speedy passage on the convention floor. The proposal has already been approved by the board of directors of the N.F.T., and now needs only the official approval of the N.F.T. membership.

Mr. Grier, who pointed out that mill executives who control 72 per cent of the looms represented by the N.F.T. are also members of the A.C.M.I., said the merger proposal calls for:

(1) The creation of a Man-Made and Silk Fibers Division of A.C.M.I., with the New York City office to be manned by a merged staff.

(2) An expansion of the A.C.M.I. board of directors from 24 to 27 and the executive committee from ten to 12 members to insure inclusion of three directors and two executive committee members from the man-made fibers group.

(3) The establishment of a standing committee to deal



Chapman, Hardman, Jones

The "Big Three" at the A.C.M.I. convention was made up of the institute's newly-elected officers—L. G. Hardman Jr., president; Halbert M. Jones, first vice-president; and James A. Chapman Sr., second vice-president.

with problems related directly to the man-made fiber segment of the industry.

The framework for the merger was drawn up by a joint committee during the past six months.

Economics Policy Committee

Approval of the foundation of an economics research division within the A.C.M.I. was also hailed as significant by delegates to the convention. Mr. Grier pointed out that the division would be directed by an economics policy committee made up of top executives from the industry. He noted that an expanded economics program would be designed to encourage member companies of the institute to make greater use of industry statistics and economic analyses in making future plans. The new division, he added, will continue the present A.C.M.I. statistics reporting program on an expanded basis.

The New Regime

ONE of the features of every annual meeting of the American Cotton Manufacturers Institute is the election of officers—the changing of the guard. By tradition the A.C.M.I. presidency is assumed by the incumbent first vice-president; he, in turn, is succeeded by the second vice-president; and a new second vice-president is elected.



Ascending to the presidency this year is Lamartine Griffin Hardman Jr., president of Harmony Grove Mills, Commerce, Ga. Popularly known as "Lam," Mr. Hardman has served the textile industry in many capacities, including that of president of the Cotton Manufacturers Association of Georgia, director of the Cotton Textile Institute and second vice-president, first vice-president, a member of the executive committee and a director of A.C.M.I. Mr. Hardman's background is one of manufacturing, finance, medicine, agriculture, politics and religion. His father, a prominent physician, served as governor of Georgia from 1927 to 1931.

Born at Commerce, Ga., in 1908, Mr. Hardman attended the Georgia Military Academy and later the University of Georgia where he received his B. S. degree in 1930. His professional career led finally to the position of president and treasurer of Harmony Grove Mills which he now holds. He also is president of the First National Bank of Commerce and president of Frozen Food Lockers Inc. of Commerce.

In addition to his distinguished work in various textile trade associations, he also is a former trustee of Mercer University at Macon, Ga., and of Truett-McConnell College, Cleveland, Ga.; chairman of the board of deacons of the First Baptist Church in Commerce; a member of Phi Delta Theta social fraternity; and a member of the Piedmont Driving Club and the Capital City Club, Atlanta.

Married to the former Dorothy Shell of Bainbridge, Ga., Mr. Hardman is the father of two sons—L. G. Hardman III and John B. Hardman—and a daughter, Shell Hardman.

In his convention address as retiring president, Mr. Grier told the delegates that the "big need" in the industry today is for mills to gear their research and production to market trends and to quit producing and selling goods on "the basis of rumor, hunch and financial pressures."

Resolutions

DELEGATES at the annual convention of the American Cotton Manufacturers Institute passed a number of resolutions, ranging from a plea for a reduction in the federal budget to the abolishment of asphalt-coated cotton picksacks. Summed up, the resolutions include:

Federal Spending—Urged that the Senate pursue budget cutting "positively and resolutely" and asserted that the proposed budget for fiscal 1958 "sets off a chain reaction that has the final result of threatening the stability of the American economy. Extravagant federal spending automatically means inflation and confiscatory taxation. Inflation and confiscatory taxation, in turn, automatically strike at the core of the American free enterprise system by strangling individual initiative and paralyzing business incentive."

Right-To-Work Legislation—Endorsed the action of 17 states that have right-to-work legislation and pledged support to other states and organizations that are "attempting to protect the fundamental sovereignty of the states in labor-management matters . . ."

Secondary Boycotts—Directed the institute to urge Congress "to strengthen the secondary boycott provisions of the Taft-Hartley Act by making any secondary boycott illegal, whether directed at employees, employers or government posts, and to make secondary picketing illegal."

Organization for Trade Co-Operation—A.C.M.I. will continue to oppose U. S. membership in the O.T.C., which the convention said "would be another giant step toward removing foreign trade policy from effective Congressional control, and thus toward suppressing our freedom to govern the internal economy of this country in accordance with the Constitution."

Dumping—Supports action designed to tighten up and make anti-dumping machinery more effective.

Depreciation Rates—A.C.M.I. would co-operate in a U. S. Treasury study of depreciation rates and would aid in the effort to gain acceptance of the "current value depreciation principle."

Corporate and Income Tax—Recommended that the corporate tax rate be reduced progressively to a point where combined rates do not exceed 35 per cent and individual rates be reduced rapidly so the top bracket rate does not exceed 35 per cent.

Asphalt-Coated Cotton Picksacks—Urged that such picksacks be completely abolished.

Robinson-Patman Act—Opposed amendments to the act on the basis they would "virtually abolish the right of competition."

Cotton Quality Preservation—Endorsed an investigation of the spinning quality of American upland cotton by the U. S. Department of Agriculture.

International Labor Organization—Asked withdrawal of U. S. participation—"financially or otherwise"—as long as the group is dominated by "unAmerican philosophies."

The New Regime



The new first vice-president of the American Cotton Manufacturers Institute is Halbert McNair Jones, president of Waverly Mills Inc. of Laurinburg, N. C. Mr. Jones, a Phi Beta Kappa and 1929 graduate of the University of North Carolina, has been in the textile industry since he graduated from the Graduate School of Business Administration at Harvard in 1931. He joined Waverly Mills that same year, was elected treasurer in 1932, and was named president and treasurer in 1936.

In 1939, Mr. Jones helped organize Scotland Mills Inc., of which he is vice-president and treasurer. He is also treasurer of Morgan-Jones Inc. of New York. He holds directorships in ten organizations and is a past president of the Carded Yarn Association. Currently he is a vice-president also of the North Carolina Textile Manufacturers Association.

Mr. Jones is also a noted education and church leader. He is chairman of the board of trustees of Flora MacDonald College, Red Springs, N. C.; a member of the advisory council on higher education, Presbyterian Church of U. S.; a member of the Presbyterian Synod Committee on Christian Education; chairman of the Laurinburg school board; and a member of the board of trustees of the Consolidated Presbyterian College.

He is married to the former Elizabeth Munroe, and they have four children ranging in age from 12 to four.

He said that while the industry's productive capacity had been declining steadily over the past 30 years—based on the number of units in operation—this decline has been more than offset by plant modernization and around-the-clock operations resulting in increased unit productivity.

"My definite impression," he said, "is that the pipelines between the greige mills and retail outlets are rapidly emptying. The short range prospects for market improvements are favorable. For the longer outlook, there is also reason for optimism. In the years just ahead, there is no reason why textile profits should not be at least comparable to the average rate earned in other American manufacturing industries."

He expressed the belief that greatest achievement for the industry during the past year had to do with foreign trade and with the manner in which the Japanese agreed to control textile exports to the U. S. "Our effort in bringing this program about involved modifying a direction in official executive policy at the highest levels in Washington," he said, "a policy set by doctrines in force more than 20 years."

"The concept of quantity limitations as a remedy for excessive textile imports has now at last been firmly established," he said, "and it is a great satisfaction to realize that the Japanese threat to our payrolls, sales and investments has been substantially relieved."

In conclusion he said, "It is foolish for us to accept the notion that the textile industry is doomed to a below-average earnings status; that we cannot offer to our employees and stockholders a future comparable to that offered

by other major industries; that we cannot share proportionately in our nation's expansion. We *can* do something about it ourselves."

Peaks and Valleys

A.C.M.I. Executive Vice-President Robert C. Jackson, in his annual report, told the convention that the industry's constant exposure to "spontaneous economic combustion" has wrought cumulative losses too often not recoverable. "We need to learn more about peaks and valleys and need some signals to warn of approaching valleys," he suggested.

He also offered a note of optimism. He said factors favor the textile industry attaining a higher level of economic activity. "I am convinced," he declared, "that we will find our place on a level with American industry as a whole."

The principal guest speaker at the convention—Senator Lyndon B. Johnson (D-Tex.)—fired a salvo at expanding government spending and told the delegates that next year's federal budget "will be studied" for foreign aid and other cuts. He said he didn't know where possible cuts might be made, but that "the hunt is on for payrolls, facilities and equipment that can be done without."

He said that in his opinion it would not be wise to slash social security for old folks who have no other sources of income, nor to cut medical research or to eliminate conservation projects which could save the country millions of dollars in soil and water resources. "The fact is," he said, "we have allowed the budget to get out of control. I am not going to try to place the blame on anyone. The facts and figures speak for themselves."

The convention also heard a pair of favorable economic reports. George B. Roberts, vice-president of the First

The New Regime



The new second vice-president of the American Cotton Manufacturers Association is James A. Chapman Sr., president of Inman Mills at Inman, S. C., and Riverdale Mills at Enoree, S. C., both in Spartanburg County. A resident of Spartanburg, Mr. Chapman has just completed a three-year term as a member of the A.C.M.I. board of directors. During the past year he served also as a member of the institute's executive committee.

Mr. Chapman has been prominent in South Carolina textiles for many years, and has held a number of important posts with various textile associations. He is a past president of the Southern Textile Association, and has also served as first and second vice-president of the American Cotton Manufacturers Association, a forerunner of A.C.M.I. He has been president of Inman and Riverdale Mills since 1936.

For many years Mr. Chapman has been active in civic affairs in Spartanburg, and has been closely associated with Wofford College there. He holds an A. B. degree and an honorary LL.D degree from Wofford and is a member of that institution's board of trustees.

He is married to the former Martha Marshall of York, S. C., and they have five sons—three of whom are active in the textile industry.

National City Bank of New York, said the country's business barometer is expected to keep on fluctuating at the prosperity mark this year. He added that economists are betting on maintained prosperity on the basis that the strong sectors of business promise to offset the areas of weakness.

C. Canby Balderston, vice-chairman of the board of

governors of the Federal Reserve System, said the solution to what he called "rolling adjustments" among segments of the economy today is not to be found in supplying sufficient bank credit to meet all credit demands. "This route leads to outright inflation with all its hardships and indiscriminate evils," he said. The right answer is to be found in "making free markets work."

The Tempo Increases:

More Textile Machinery Plants For The South

Back in 1881 after America's first textile machinery exposition was held in Atlanta, the cry "Bring the mills to the fields!" sparked a frenzy of mill construction and the industrial revolution in Dixie was under way. Spurred by the advent of the automatic loom and electrical power, the end of the revolution is not yet in sight.

AMERICA'S first textile machinery exposition was held in Atlanta in 1881 under the auspices of machinery manufacturers, centered in New England. In a broad sense, this exposition sparked an industrial revolution in Dixie, the end of which is not yet in sight. Known as the International Cotton Exposition, it ran from Oct. 5 until Dec. 31. Textile mills bought more than \$2,000,000 worth of textile machinery—an amount which in those days was an astounding figure.

The great bulk of the spinning and weaving mills were centered then in New England too and the New England cotton manufacturers had a big stake in this Southern exposition also. One primary purpose of the big display of spinning and weaving machinery in actual operation was to impress upon the cotton growers of the South the need of properly preparing the fiber for mill use. The exposition accomplished its primary purpose, all right, but there was also a rather ironic economic twist no one had anticipated.

There were, of course, a few cotton mills in the South back in 1881, and if there was one thing the region needed then more than anything else in the aftermath of war and reconstruction, it was more industry and more jobs. By the time the exposition ended it had begun to stimulate to a very appreciable degree the interest of Southern business men in the manufacture of cotton textiles.

Other factors were also involved, but almost overnight the domain of King Cotton began to echo with the cry, "Bring the mills to the fields!" In the next decade the Southeastern states experienced a veritable frenzy of mill building. And in time, as new textile enterprises spread through the Piedmont, the American textile industry's center of gravity began to shift. By fateful coincidence, the last decade of the nineteenth century saw the introduction of

the automatic loom, an invention which gave the new plants in the South a revolutionary edge.

Meanwhile the advent of electrical power and other advances of technology made it much easier for the textile industry to break free of its old or traditional geographic limitations and hastened the migratory movement of the mills southward and the building of new mills in the South until finally about 80 per cent of the industry's productive capacity became centered in the region, largely in the Piedmont plateau.

After rayon came importantly upon the scene, the production and the spinning and weaving of this fiber became relatively the same kind of Southern operation as was represented by cotton. The man-made or non-cellulosic fibers began to emerge from test tubes and that became primarily a Southern story too. Finally the woolen and worsted industry began to shrink sharply in New England and the Middle Atlantic states and brand new manufacturing facilities arose in the Southeast, along with the region's first wool scouring and combing plants. One after the other, too, the old line carpet manufacturers began to relocate importantly in the Southeast.

Now, finally, the signs appear unmistakable and lately are quite dramatic: the textile machinery industry is tending to gravitate to the Southeast. For decades of course there have been some Southern textile machinery firms but basically and primarily it's been a New England-based industry since Francis Cabot Lowell and Paul Moody set up a machine shop at Waltham, Mass., in 1814 to build a practical power loom and other machinery.

Particularly since the end of World War II new machinery manufacturing plants have begun to dot the Southern landscape, but probably the most significant part of the developing picture has been the expansion of manufacturing facilities in the Southeast by the giants of the industry which are still home-based in New England. The machinery manufacturing industry is still predominantly a New England one, but the South is gradually getting a larger part of the productive facilities.

Obviously, it is logical and advantageous for a manufacturer to be geographically close to the bulk of his customers. Just as obviously, while large machinery manufacturers have maintained depots for machinery and parts, repair

shops and distribution centers at strategic locations in the textile South to eliminate geographic distances, transportation and supply problems, it hasn't been economically feasible for the textile machinery manufacturing industry to pick up and relocate in the South as various segments of the textile industry and textile-related industries have done in recent years.

Primarily, of course, this is because the New England machinery industry represents millions upon millions of dollars in plant and foundry investment. And capital simply was not sufficient to warrant a pronounced or marked shift in location. There was, too, an additional factor of trained personnel backed by the skills of generations. But expansion and the trend toward relocation of expanded facilities in the South has accelerated in the postwar period, as has the trend to diversification of other machinery manufacturers to get into the textile field.

There are innumerable striking examples of this phase of the Southeast's new industrial growth or bloom. A particularly significant development of the moment is that with the completion of its big Easley, S. C., plant, representing a reported investment of more than \$6 million, Saco-Lowell Shops, one of the giants of the industry serving the whole world, will have a very large part of its operations in the Carolinas. When full operations are begun, the new plant in South Carolina is expected to employ between 800 and 1,000 people. Saco-Lowell also operates a plant at Sanford, N. C., which has experienced a sustained growth in recent years.

Sanford, incidentally, is also the home of The Roberts Co., a Southern concern which a little less than a decade ago started out on a small scale making replacement parts and which has grown and expanded consistently until now there are about 450 employees turning out complete spinning frames which accounted for a gross business of about \$3.5 million in 1956. There are four plants of The Roberts Co. in Sanford as well as a chemical laboratory.

Currently a new building, unusual in type, is being constructed at one of the Roberts plants. It will be used for handling steel and other metals by the company in manufacturing the various components for spinning frames. A three-ton overhead traveling crane will run from one end to the other of the 6,000-square-foot building which has a reinforced concrete floor designed to carry exceptional storage weights and permit the use of heavy presses for cutting operations.

Hartford Machine Screw Co. of Windsor, Conn., is building a 20,000-square-foot manufacturing plant near Greenville, S. C. Capital investment in the building and equipment, it is reported, will exceed \$400,000 and the plant in full production will employ 90 persons. The products of the company include drafting units and spindles. The main plant of the company, established in 1876, is located at Windsor.

Also Proctor & Schwartz Inc. of Philadelphia, Pa., manufacturer of textile fiber processing and industrial dyeing machines, has announced it will establish a plant near Waynesville, N. C., leasing a building that will be erected by local interests. The Waynesville operation will be a branch of the Philadelphia plant and is to be launched on a relatively small scale, according to the announcement, but a program will be undertaken to train local workers for jobs with a view to future expansion.

Southeastern Loom & Machine Works of Greenwood,

S. C., a division of Abney Mills, has a brand new plant at Greenwood. The buildings consist of foundry, machine shop, pattern shop, parts supply, shipping and assembly, and air-conditioned offices. The modern, one-story plant has about 138,000 square feet of floor space and is situated on a tract of land that includes ample space for future expansion.

Within the last few years Draper Corp., one of the nation's oldest loom builders, has built a large plant and warehouse facilities at Spartanburg, S. C., and the operation involves the employment of more than 600 persons. The plant of Whitin Machine Works in Charlotte has undergone three expansion programs in the past decade and during that time personnel has increased from about 75 to more than 300.

Recent months have brought numerous announcements of various new plants and expansion projects. As an example, Cocker Machine & Foundry Co. of Gastonia, N. C., announced plans to move to Ranlo, two miles away, as part of a \$275,000 expansion program. A new building containing 40,000 square feet of floor space is to be built at Ranlo to house the company's machine shop, warehouse, erecting department and executive offices. A part of the Cocker operation already is in Ranlo, a new foundry having been built there in 1948 and subsequently a cleaning room, sheet metal department and creeling department have been added. Cocker, incidentally, is one of the oldest textile machine manufacturers in the South.

And so it goes, one such development after another. McDonough Foundry and Machine Division of McDon-



A NEW WORLD'S SAFETY RECORD for textile plants was set at Pensacola, Fla., last month by the Chemstrand Corp.'s big nylon plant. On the morning of March 12, the plant's more than 4,800 employees topped the previous record of 13,624,000 man-hours without a lost-time injury. According to National Safety Council figures, this represents the safest work record among the more than 7,000 textile plants in the U. S. The previous record was set in 1952 by the Forstmann Woolen Mills of Passaic, N. J. Chemstrand's Pensacola plant started its record-breaking safety run August 25, 1955.

ough (Ga.) Power Equipment Inc., recently moved into its new 78,000-square-foot plant where the new facilities will be used to produce the McDonough universal card coiler and other textile equipment.

The James Hunter Machine Co. of North Adams, Mass., has established its recently-acquired Southern Division, W. D. Dodenhoff Co. Inc., Greenville, S. C., as Southern sales and service headquarters for two other Hunter Divisions, Thomas Leyland Machinery Co. and Hunter Controls Inc.

Looking Into

The Future For Synthetic Fibers

By DR. FRANK J. SODAY, Vice-President and Director
Research and Development Division, The Chemstrand Corp.

Today there are nine major synthetic fibers on the market made from polymers derived from chemical raw materials. Current use of these fibers is just under half a billion pounds a year, a 50-fold increase in the last 15 years. And what does the future hold? Dr. Soday, in a recent address at the Spring meeting of the American Institute of Chemical Engineers at White Sulphur Springs, W. Va., predicted that consumption will be up to four billion pounds by 1975.

AN indication of the confidence of industry in the future of synthetic fibers is shown by a recent compilation listing the names of some 800 semi-synthetic fibers in various stages of development or production throughout the world. When evaluating the future potential for synthetic fibers, the requirements for the major end uses must be kept in mind. In the apparel field, aesthetic qualities and styling are generally more important than utility. Blends of synthetic fibers with cellulosic or natural fibers are widely employed to obtain desired surface or other characteristics. Fabric designing, dyeing and finishing are important considerations.

Present emphasis on ease of living is accelerating the development of wash-and-wear fabrics. The wrinkle resistance and crease retention properties of many of the synthetic fibers make them of particular interest to the apparel field.

Fibers purchased for industrial applications are chosen mainly from the standpoint of physical properties and price. Tensile strength, softening point, chemical resistance and wearing qualities are important. Fibers for household uses generally are chosen with both aesthetic appeal and performance in mind.

Fiber Properties

Synthetic fibers generally have excellent mechanical properties but they are hydrophobic and thermoplastic. The first

The Dodenhoff Division, which produces and distributes Fiber Meter, automatic blending systems and other textile equipment, centers its manufacturing, sales and service facilities in Greenville.

These and similar developments over the last few years—no attempt is made at an all-inclusive recapitulation, but rather to cite some of the larger as well as some of the typical examples—tell a meaningful and significant story, from the standpoint of the textile industry as well as the Southern economy. They would seem to add up to the inevitable conclusion that textile machinery and equipment manufacturing is definitely to become a larger part of Dixie's spreading industrialization.

property promotes the development of static electricity and may make dyeing difficult. However, being hydrophobic improves the fiber's resistance to soiling and launderability. The thermoplasticity of synthetic fibers makes it easy to impart permanent pleats and creases to synthetic fabrics but it may result in glazing of 100 per cent synthetic fabrics.

Other problems associated with synthetic fibers are pilling, fibrillation and dyeing. Pilling results when a broken strand of fiber curls into a ball on a fabric due to wear and does not break off because of the fiber's strength. It is usually controlled by proper fiber blending. Fibrillation results when small strands along a single filament break away and form a white powder which masks the color of the fabric. It may be readily controlled by proper orientation of the fiber during the manufacturing process. Dyeing problems generally are solved by the incorporation of dye acceptors in the polymer, as in the acrylics, or the use of dyeing assistants, as in the polyester fibers.

New Manufacturing Methods

A substantial amount of work has been carried out by different companies on various spray and draw techniques for the production of synthetic fibers without using spinnerettes. One such procedure provides for dopes or melts to be drawn into fibers by dispersion on counter-current cylinders. In another recent development dopes or melts are sprayed into a current of heated air or gas resulting in the production of microfibers which are of irregular length and small size (0.2 denier or less). The microfibers can be combined with more conventional fibers during the spinning process. The procedure offers many interesting possibilities to the fiber technologist.

Dope dyeing, in which the dye or pigment is incorporated into the dope or melt prior to the spinning operation, is assuming greater importance in the synthetic fiber field. Dyed fibers can be obtained at less cost and with greater colorfastness than by conventional dyeing procedures. The large number of colors required by the textile trade has retarded developments in this field to a certain extent.

Improved antistatic finishes are being developed for several synthetic fibers. A substantial amount of work is being done on the development of permanent antistatic characteristics by incorporation of hydrophilic ingredients into the fiber molecule prior to spinning.

The utilization of continuous filament yarn is restricted in certain applications due to the smooth surface of the fabrics prepared from such yarn. Procedures for altering the surface characteristics to simulate the appearance of spun yarns are being developed. In the Taslan process, a multifilament yarn is passed through a fine orifice accompanied by a stream of air moving at high velocity. This causes the formation of tiny loops at irregular intervals along the yarn, thus breaking up the smooth surface and providing a texturized effect. When made into fabrics, this yarn produces a hand and touch similar to that of a spun yarn fabric.

Stretch yarn produced by a variety of procedures, such as the false twist technique, have greatly stimulated the use of nylon in many apparel fields. Men's socks are a good example of the use of stretch yarn. Extensive work on the improvement of such processes with respect to quality and reduction in price indicates that this development will substantially increase the use of certain synthetic fibers in the apparel industry.

Bulk yarns are being produced from a number of acrylic fibers. There are three general procedures being used for this purpose. In one method the tow is stretched at elevated temperatures and converted to staple. The staple is then blended with normal staple and spun into yarn. In another method, the tow is stretched and broken on a Turbo Stapler to form sliver. A portion of the sliver is relaxed in the presence of steam at elevated pressures. The relaxed sliver is then mixed with unrelaxed sliver and spun into yarn. In a third method, the tow is stretched at elevated temperatures. This is known as hi-bulked. The stretched tow is then combined with normal tow and cut into sliver on a Pacific Converter after which it is spun into yarn.

When fabrics made of this converted yarn are steamed or immersed in hot water, the stretched fibers relax and pull the unrelaxed fibers into disordered clumps. This increases the apparent bulk of the yarn and gives a lofty hand to the fabric. Bulk yarns are generally used in the manufacture of acrylic fiber sweaters and a variety of other apparel items.

Future Potentials

A number of important uses for synthetic fibers are summarized in this listing:

- I. Pile Fabrics
 - (a) Outerwear
 - (b) Linings
 - (c) Rugs
- II. Plastic-Fiber Laminations and Coatings
 - (a) Tarpaulins and Tents
 - (b) Inflatable Buildings
 - (c) Collapsible Tanks and Containers
 - (d) Air-Spring Bellows
 - (e) Structural Members
- III. Non-Wovens
 - (a) Drapes, Upholstery and Other Household Uses
 - (b) Disposable Clothing
 - (c) Specialty Paper

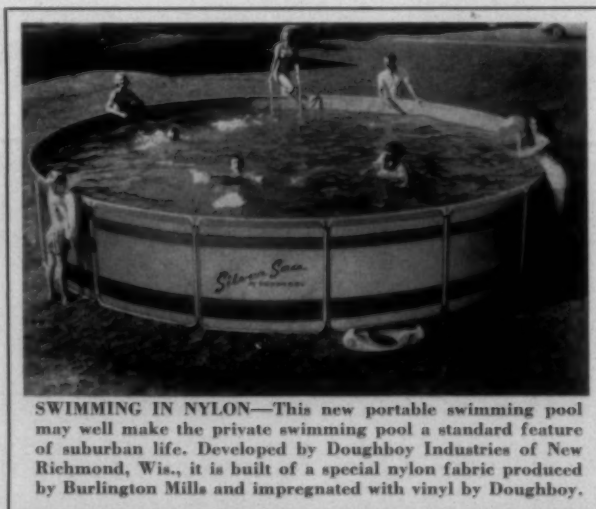
Pile fabrics already have made a permanent place for themselves in the synthetic fur and fleece field. There is a potential market of about 100 million pounds per year available for exploitation in this field. Recent developments have served to improve the quality of pile fabrics and reduce their price. In addition to their use in outerwear and linings, pile fabrics may find a rapidly expanding market in rugs.

A potential market for synthetic fibers, estimated to be nearly 70 million pounds per year, is in the fabrication of tarpaulins and tents. The use of high tenacity nylon yarns for this purpose results in substantial savings in weight which is of considerable importance in certain applications. Nylon tarpaulins are usually coated with neoprene or vinyl resin and some problem with adhesion is encountered with the vinyl coating.

Inflatable buildings made from plastic or rubber-coated synthetic fiber fabrics offer an almost unlimited field for expansion. These buildings are essentially balloons which are permanently attached to the earth. They were first used to house large radar installations in Canada and Alaska. It was found that with lightweight fabric supported by only a few ounces of internal air pressure, wind velocities of 150 miles per hour could be readily tolerated. An inflatable building constructed on this principle has been purchased by a Chicago firm for use as a hardware store. The air pressure is maintained by use of a small air pump and entrance to the building is permitted by a standard revolving door. The internal air pressure is sufficiently low to permit continued occupancy without discomfort. It is expected, if this initial installation is successful, that the market for inflatable buildings for warehouses, stadiums, municipal buildings, retail stores and military purposes will increase at a rapid pace.

Collapsible tanks and containers for the storage of solids, liquids and gases are now being manufactured by a number of firms. These tanks and containers are readily adaptable as either permanent storage units or they can be transported by a number of methods.

The steel spring suspension system in cars is being challenged by a new suspension system based on the use of compressed air. The system uses a coated synthetic fabric bellows as a suspending and shock absorbing member. The automotive industry estimates that 90 per cent of the trucks and buses produced in 1960 will utilize air bellows rather



SWIMMING IN NYLON—This new portable swimming pool may well make the private swimming pool a standard feature of suburban life. Developed by Doughboy Industries of New Richmond, Wis., it is built of a special nylon fabric produced by Burlington Mills and impregnated with vinyl by Doughboy.



LOOK WHO'S IN THE QUALITY CONTROL ACT NOW

Acrilan has now moved into the spotlight enjoyed by Chemstrand nylon for unexcelled fiber quality and uniformity.

For nearly two years, the record of Acrilan acrylic fiber in mill after mill has earned it the top spot in smooth-running, efficient performance.

To achieve this record, Acrilan took an important leaf out of Chemstrand nylon's book on quality control. And in many ways, at Pensacola, Chemstrand nylon *did* write the book on new standards for man-made fibers.

Now, at Decatur, Alabama — where Acrilan is manufactured — this same concept is being applied. It embraces the most comprehensive specifications, the closest tolerances, the most exacting standards ever set up for producing a man-made fiber. This we call *Acrilan* quality control.

This control is in continuous operation at every single step of the entire manufacturing operation . . . and beyond it . . . to a complete pilot mill where Acrilan is test-processed 24 hours a day, 7 days a week, on machinery that duplicates the normal conditions of mill operation.

How does this answer your problems? By providing four important advantages, among others, in the processing qualities of today's Acrilan:

- *A staple-length uniformity superior to most critical needs in the textile field.*
- *A reduction in fly so significant it is raising yarn quality, reducing mill cleaning costs and waste.*
- *An improvement in high bulk processing that gives far greater assurance of fabric-shrinkage control.*
- *A dye merge uniformity now unchanged in over two years.*

Because of these advances (and they are by no means all), current production of Acrilan has reached and is maintaining a level of uniform quality hitherto considered impossible in the newer, man-made fibers.

Equally pertinent . . . under our concept of control, *each* new gain in Acrilan quality tightens the specifications that much more . . . promising further increases in your mill efficiency and production quality.

Yes, Chemstrand nylon is now sharing the spotlight for fiber performance with Acrilan. And the act is a smash-hit in every mill this fiber plays in!

ACRILAN

THE CHEMSTRAND CORPORATION • GENERAL SALES OFFICES: 350 FIFTH AVE., NEW YORK 1, N. Y. • DISTRICT SALES OFFICES: 316 Overwood Road, Akron, Ohio; 4 Pearl Street, Dedham, Mass.; 222 South Church Street, Charlotte, N. C. • PLANTS: ACRILAN® ACRYLIC FIBER—Decatur, Ala.; CHEMSTRAND® NYLON—Pensacola, Fla.

than steel springs. This makes a market of nine million pounds per year available to the synthetic fiber industry.

A challenging field for expansion of synthetic fibers is their use as reinforcing agents for plastics in building and other construction operations. It is expected that the development of satisfactory fiber laminates and other shapes will largely increase the market for such construction units. Buildings from such materials could be readily erected and easily maintained. Development along these lines could prove to be the most important new outlet for synthetic fibers during the next decade.

Non-Woven Fabrics

Non-woven fabrics are bonded web structures of textile fibers. The binding is done with resins, latices or thermoplastic fibers. A bonding technique now being developed is needlepunching. In this method the fibers composing the web are interwoven by passing special needles through the structure until the desired degree of intermeshing is achieved.

Non-woven fabrics can be prepared on continuous process equipment. The main factor retarding their rapid growth is the cost of the binding agent. The use of the needlepunching technique would eliminate all requirements for thermoplastic fibers or adhesives in the construction of non-woven fabrics. Non-wovens are being used in a wide variety of household applications, for casual and disposable clothing, for the manufacture of industrial felts and filters and in specialty papers.

The foregoing is only a small part of the potential markets for synthetic fibers. They have been selected to emphasize the ability of synthetic fibers to meet the requirements of widely diversified end uses in the textile field. From an over-all standpoint, the continued improvement of synthetic fibers with respect to dyeability, hand, wrinkle-resistance, and crease-resistance will result in their expanding use. In a similar manner, the improvement of strength and abrasion-resistance, coupled with reduction in price will result in an expanding demand in the industrial field. It is predicted that the use of synthetic fibers for all purposes will increase to 1.1 billion pounds in 1965 and to four billion pounds by 1975.

The Foreman And The New Employee

IN days like these when capable employees are hard to come by and desirable to hold, it may be well to consider some factors in the foreman-new employee relationship. First impressions are all-important to the new employee and contribute a large measure to his attitude toward his job, his department and the plant as a whole. It is really not very difficult to make a good impression on the new employee. The only necessary components are simply following rules of human kindness and decency.

The foreman should, first of all, put the new employee at ease. Putting the new employee at ease is as important on the "first day on the job" as it is in later days during his instruction period. An important point for the foreman to remember is to be not merely friendly but sincerely interested in the new employee, his family, his problems and his aims. This action on the foreman's part will do much to assure a valuable co-worker for the department.

Introductions

Introductions are important in the foreman-new employee relationship. The foreman should, very carefully, introduce the new employee to his new environment, beginning with the shift foreman or the new man's immediate supervisor. Another, most critical from the new man's point of view, introduction which should be made is the timekeeper. Rates of pay, methods of pay, methods for keeping records on hours worked are things with which the new employee should be thoroughly familiarized. Location and operation of time clocks should be gone over closely so that the new employee will have a firm understanding of this phase of his job. Remember, the new employee is coming to work in your plant, primarily, for the money he gets out of it. He wants to know all he can about how the pay system operates.

The foreman should also introduce the new employee to his fellow workers. Try to keep these introductions on a "first name" basis, except where obvious age, marital or other factors advise against it. Try also to impart the spirit of getting on the team right away. It may take months for the new man to become acquainted around a department if this introduction is not made. Many times a new employee may be from a distant area of the country. This makes the importance of these introductions more obvious.

Familiarize The New Employee With The Plant

Where it is possible, it is desirable for the foreman to show the new employee the whole plant. This is done to give the new man an idea of the operation, as a whole, and



the bearing which his job has on the entire operation. His job is important. If it weren't the company would not be paying to have it done. Now, the new employee should be impressed with the importance of his job. He should be impressed with the importance of doing the job properly,

with the full use of whatever facilities are at hand and without getting hurt in the process.

If it is not possible to show the employee the entire plant, then he should surely be shown the entire department in which he will work. Checkpoints on the tour should be as follows: (1) location of stopping place of lunch wagon; (2) location of smoking areas; (3) location of locker room; (4) location of drinking fountains; (5) location of dangerous areas with which he is not familiar; (6) location of first aid box or whatever facility there may be for treatment of minor injuries; (7) location of tool or supply room, if he will be using it; and (8) any other place he will be using.

Time To Ask Questions

After the tour of the plant or department, give the new employee the opportunity to ask as many questions about the job as he likes. There may be a difference between his beginner's wage and his regular wage. If so, be sure he understands these conditions thoroughly. Be certain he understands the requisites which must be met before his pay is increased to the full regular wage. If there is an incentive system in the department the foreman should be certain that the new employee gets all the information on this system from him. The new employee's fellow workers may distort the operation of the incentive system, thereby crippling to some extent the effectiveness of the system.

During the new employee's question time, the foreman

should re-emphasize the necessity of doing good quality work. The foreman should also explain how important it is to the operation of the department that the new employee report for work regularly. He should explain the hours of work carefully, including when to report for work, where to report for work and how long the work period will last.

Another good point for the foreman to bring out, during this time, are any local departmental rules which may be in effect—what to do with drink bottles and lunch bags; how to report accidents; how to flag machines which are out of fix or which may be doing sub-standard work; how to ask off work; who to call if it is not possible for the new employee to get to work on time. These and many more questions should be answered at the beginning in order that some future misunderstanding may be avoided.

Follow-Up

After the new employee has been given this thorough review of the many aspects of his job, it would be folly not to follow-up and make sure all points were covered properly. The foreman should have a helpful rather than critical attitude. Of course, the foreman wants the new employee to do a good job and get along well with his fellow-workers. But the foreman must show this desire with actions of helpfulness. To many new employees the boss is just the boss, until proved otherwise. The foreman must remember that a pat on the back now, during the "break-in" period, may well be worth two kicks in the pants later on.

Opening, Picking, Carding & Spinning

Research Study:

Sliver Evenner For Roving Frames

By DR. HUGH M. BROWN, Dean, School of Textiles, Clemson College

The results of this really remarkable research work conducted by Hugh M. Brown & John S. Graham of the School of Textiles at Clemson College are abstracted from the account delivered before the National Cotton Council's recent Cotton Research Clinic.

EVENESS of yarn is one of the greatest concerns in the entire textile manufacturing process. Much care has to be exercised to form laps that are uniform from picker to picker and have linear regularity. Outsized laps are customarily separated and handled differently than those within certain tolerances. Though the variation in sliver caused by the remaining variation in laps is somewhat minimized by doubling and drafting at the drawing frame there still remains considerable variation in the sliver fed

to the roving frame, where again, this variation occurs among different slivers and along any given sliver.

In view of this situation apparently much could be gained by the use of a device to feed various size slivers into the roving frame at the correct rates to produce uniform size roving from all deliveries. Such a device compensating for wide range variations would eliminate the necessity for producing closely-sized laps at the picker and outsized laps could be run along with the others. Not only would there be a saving in the cost of sliver production but also an improvement in the quality of yarn and fabric produced from the evenner roving.

A fundamental problem arising in such a system is that since the size of the roving produced is independent of the size of the sliver fed to the roving frame, the size must be determined by constants within the evennering device. This requires that the size-determining constants in all

HERE'S WHY



ARMSTRONG J-490 COTS REDUCE LAP-UPS ... NO MATTER WHAT YOU'RE SPINNING

Whether you're spinning natural fibers, synthetic fibers, or blends, you'll get far fewer lap-ups if you use the roll cover with "built-in" lap resistance—Armstrong J-490 Accotex®.

J-490's resist lapping because they are made of a patented synthetic rubber compound that effectively neutralizes the normal electrical attraction between roll cover and fiber. The compound contains special electrolytes that actually tend to repel broken ends, preventing them from lapping.

The J-490 compound offers other important advantages, too. Because it contains no rough fillers, its drafting surface is always uniformly smooth. This roll cover won't pull fibers from the stock, neither will it cause excessive ends down.

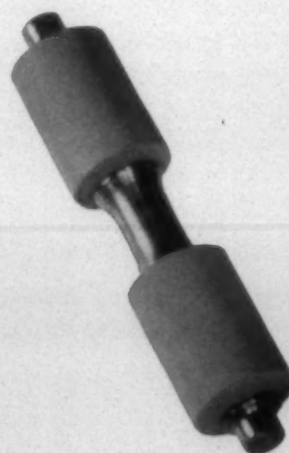
Armstrong J-490 Cots are durable, too. Their synthetic rubber compound

is exceptionally long wearing, and is never affected by oils, dyes, or commonly used textile solvents. In fact, all that's normally needed to keep this cot spinning like new for years is an occasional re-buffing.

You can prove on your own frames how long-wearing J-490 Accotex Cots help prevent lapping and improve yarn quality. Your Armstrong representative will be glad to arrange for a test side. Call him today, or write direct to Armstrong.

For more information about J-490 Accotex Cots and the many other Armstrong textile products, write for a copy of our new booklet, "Armstrong Textile Products." Address Armstrong Cork Company, Industrial Division, 6504 Ivy Street, Lancaster, Penna. All Armstrong textile products are available for export.

P. S. Whatever the problem in your spinning room, you'll most likely find a quick solution in one of several materials in the Armstrong Accotex line. For example, there are special compounds designed to give maximum eyebrow resistance. And if you need the improved yarn control offered by a softer material, there are Accotex compounds to meet this need. Where high-static conditions aggravate the lapping problem, there is a group of new anti-static Accotex materials made especially to combat these conditions. Your Armstrong man will be glad to help you choose the right roll cover for best performance in your spinning room.



Armstrong ACCOTEX COTS
... used wherever performance counts

units must be easy to set and maintain at fairly constant values. Otherwise different size rovings will be produced by different deliveries. Other requirements for an acceptable evening system are that it not be too costly, either originally or in maintenance, and that it be fairly simple and trouble free.

The problem then is to select a method between those sufficiently elaborate to do a nearly perfect job regardless of cost, and the method that gives so little evening that it would not be used however low its cost. The problem might be attacked by having the roving frame deliveries independently driven but such a solution would probably be too costly. To change the speeds of the input rolls at each delivery could be accomplished either with separate motors or variable speed drives from a common source of power. Either plan would probably be more or less complex and expensive, and the problem of maintaining like performance between the various units would be difficult.

It seems more promising to devise a system having conical input rolls on a common shaft. The sliver would move laterally in relation to the tapered rolls so that it will be fed at the correct rate to obtain the desired size roving. At first glance this problem may also seem costly. It is believed that the cost of conical rolls in pairs (See Fig. 1) with a weighted saddle carrying matching pairs of conical top rolls may be justified, assuming a simple mechanism for shifting the sliver can be devised.

This project has been an extended study of several methods for shifting the sliver along the rolls. The results of the study indicate that some sort of a servo device is needed to positively position the trumpet; providing a servo for each delivery could be justified only if it were a simple, low cost mechanism.

Servos operating on the usual electrical or electronic principles are probably too expensive for consideration. Since it is common to have compressed air available in the

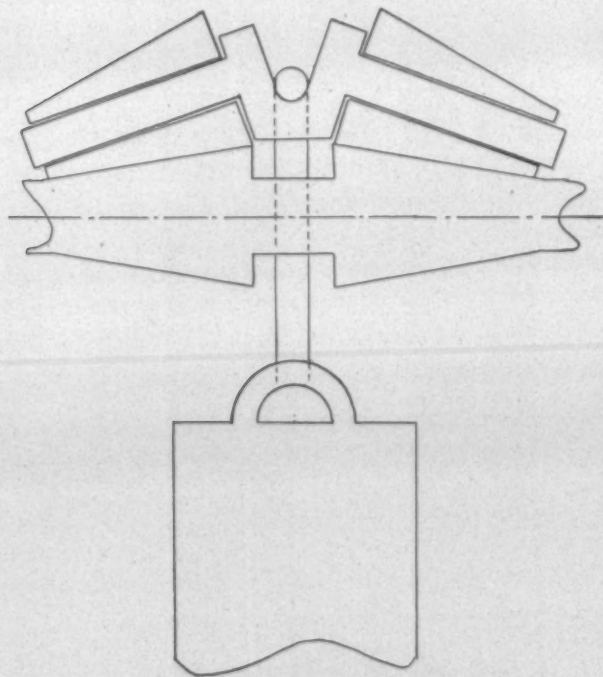


Fig. 1—Conical feed roll system.

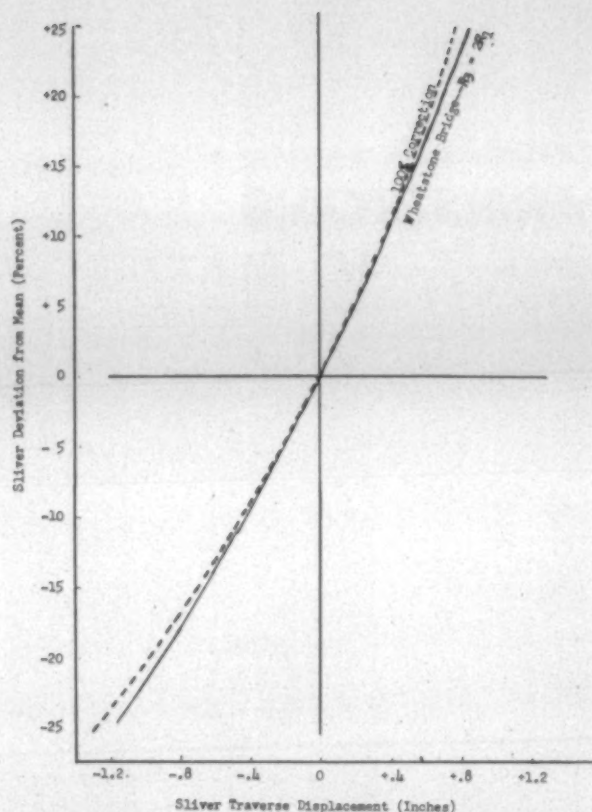


Fig. 2—Theoretical sliver correction for pneumatic wheatstone bridge traverse.

mills, it is believed a simple mechanical-pneumatic servo can be engineered at a cost that would be justified by the results produced.

Analysis Of The Problem

To simplify manufacture it was decided to use conical rolls having a straight taper. It is obvious that equal shifts of the sliver along the rolls near the small end will produce relatively greater changes in sliver speeds than similar shifts near the large end of the rolls. It was decided in the first unit to cover a range in sliver size of plus or minus 25 per cent, and to do this the average size sliver cannot be run midway between the two ends of the roll but must be positioned somewhat nearer the smaller end.

In Fig. 2, the dotted curve shows the theoretical displacement required for full compensation for any sliver within the range of plus or minus 25 per cent. Compensation as used in this case means feeding the input sliver at a constant weight per unit time. The arrangement which seemed to best meet the ideal curve is a form of pneumatic Wheatstone bridge (Fig. 3) using a bellows differentially in the analogous position of the galvanometer in an electrical bridge circuit. The bellows is made amply large so that the differential force caused by different size slivers in the trumpet will be sufficient to move the trumpet and positively position it for feeding in fiber at a nearly constant rate.

If the resistance of the bridge arms R_1 and R_2 is approximately equal to the resistance of arms R_3 and R_x (R_x being the sliver) the response in either direction from the mean is so nearly alike that the correct positioning requir-

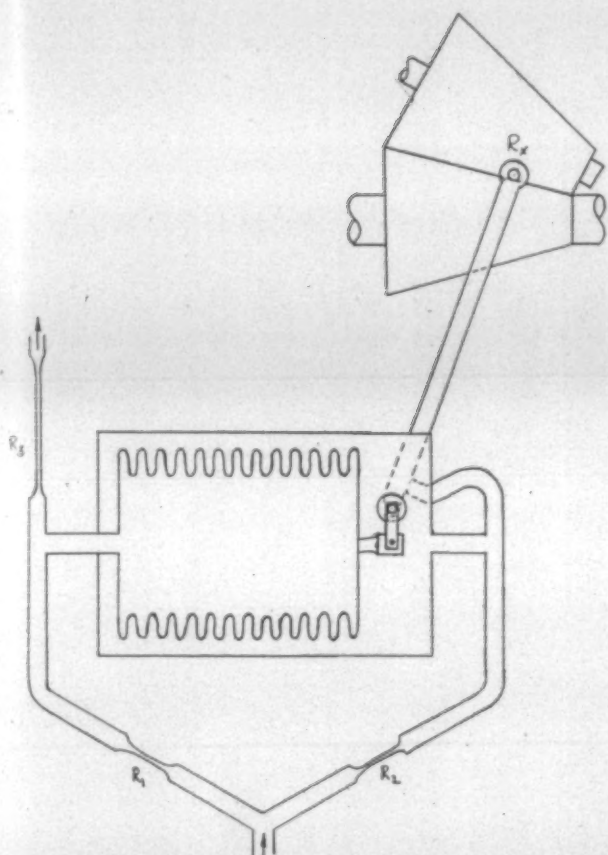


Fig. 3—Pneumatic servo-mechanism for shifting sliver along conical rolls.

ed for straight conical rolls cannot be obtained. However, by making the resistances R_1 and R_2 much less than the resistances R_s and R_x the movement for a given sliver variation on the high side is less than for a similar variation on the low side and the positioning more nearly follows the curve required for perfect compensation.

It has been tacitly assumed that the resistance to air flow by the sliver in the trumpet is exactly proportional to the sliver size. It is realized this is not strictly true and that for extremely light or extremely heavy slivers no degree of proportionality would exist. Another consideration is that the sliver is being drafted between the conical back rolls and the next pair of drafting rolls, and it is well known that actual draft differs somewhat from theoretical draft and this divergence also varies with the size of the back roll. Thus with conical back rolls there would be a variable departure between actual and theoretical draft as the sliver is laterally shifted along the conical rolls.

There are several other minor effects that could be considered but it was hoped that all the secondary effects might tend to offset each other and not materially reduce the degree of compensation computed.

Results

Fortunately, in practice, the device gives even better performance than would be indicated by the theoretical curves. Table I shows the variation in output sliver size for input slivers varying from 33 to 50 grains. Each figure in the table is the average of five readings with the range and coefficient of variation shown for each set. The compensation

seems exceptionally good in that at no part of the range covered does there seem to be much trend away from perfect correction. Also, note that in all sets of readings the coefficient of variation is less than one per cent.

TABLE I
ACTUAL SLIVER CORRECTION ON FINISHER DRAWING

Input Sliver gr./yd.	Output Sliver gr./yd.	Range gr./yd.	Coefficient of Variation Per Cent
33.1	31.28	.7	.89
36.6	31.52	.5	.55
39.0	31.34	.3	.33
41.6	31.26	.6	.63
46.1	31.30	.9	.97
50.7	31.68	.6	.73

The above data pertains to the average size of the sliver measured in one-yard lengths. Compensation for very short-term variations is not as good. One reason is that it takes some time for the sliver trumpet to move to a new position called for by an abrupt change in sliver size. For example, if a 25 per cent step is made in the input sliver it takes approximately three inches of sliver for the correction to become complete. However, there is immediately a considerable correction of the deviation. On the other hand, for steps or rapid changes in sliver size, the trumpet can be made to move too rapidly so that bad miscorrections are made for the sliver already having passed through the trumpet. It can be seen that there will always be some miscorrection on the sliver immediately ahead of a change in sliver size, since while the trumpet is moving in response to the new size sliver, it will also effect the draft of that already entering the rolls. It seems, though, that this effect is small for all but rapid changes in sliver size.

It should be noted that correction for long-term variations of small amplitude is excellent and that even imperfect correction for large variations is far better than no correction at all. It should also be realized that with the Wheatstone bridge method variations in air pressure do not cause errors with mean-size sliver though large variations will be over-corrected if the pressure is too high and under-corrected if too low, but here again the corrections, though not perfect, would be in the right direction and would be better than no correction. It is felt that control of the air pressure will not be a serious problem.

TABLE II
ACTUAL SLIVER CORRECTION ON FINISHER DRAWING

Input Sliver gr./yd.	Output Sliver gr./yd.	Range gr./yd.	Coefficient of Variation Per Cent
41.0	39.40	.9	.81
42.2	39.70	.5	.52
45.0	40.30	1.0	.88
46.5	40.22	.4	.37
51.6	40.14	.6	.52
54.4	40.33	.1*	.17*
59.8	39.80	.5	.48
61.6	39.10	1.3	1.38
62.4	39.32	1.2	1.12

*Based on three readings

To adjust the device for different size slivers it is planned to have simple interchangeable trumpets that can be quickly inserted in the trumpet arms. Runs made with a larger trumpet gave excellent compensation for slivers varying from 41 to 62 grains (See Table II). Forty output slivers

had a spread of only 1.3 grains and a maximum coefficient of variation of 1.4 per cent. Here again the results are averages on five one-yard lengths. The evenness tester showed reductions in unevenness of approximately one-third.

The device would probably be too costly for use on spinning frames, but by using smaller trumpets the unit worked nicely with rovings. In a large number of tests the unevenness of the output roving was always reduced, the reduction being from very little to one-third, depending on the evenness and type of variation of the input roving. Incidentally, by placing a pen on an extension of the trumpet arm, the movement of the trumpet can readily be recorded on a moving chart. Such charts show that with roving passing through the trumpet at one yard per minute the movement follows almost exactly the trace given by the evenness testers. This proves that the device does shift the roving in accordance with its size and indicates that this

pneumatic bridge method could be used as an evenness meter.

Conclusions

From the progress to date it seems that using the principles outlined it may be possible to develop an evenner-mechanism for roving frames sufficiently practical and economical to be justified by its results in terms of yarn improvement and savings in production costs. Use of the device would make close control of picker lap weight unnecessary.

An advantage of this evenner is that output sliver size would be essentially independent of moisture regain of the stock, which is not the case when sizing sliver by weighing.

One possible drawback has not been mentioned, namely that variations in fiber fineness affects the size of the roving produced. It is believed, however that with modern blending methods this would not materially impair the value of the system.

Warp Preparation & Weaving

A 14-Week

Inspection Schedule

For Draper E Model Looms

A real maintenance program which features a regular inspection of all parts will be a long step toward keeping looms operating at peak efficiencies and may eliminate the necessity of ever having an organized major overhauling program. Here is a guide which will help in formulating such a maintenance program to fit the needs of the individual weave room.

PROPER execution and follow-up of this 14-week inspection schedule, along with the completion of maintenance dictated by local conditions, will do much toward keeping Draper E model looms, which are in good condition, running at peak efficiency. Following an intensive inspection program of this kind will oftentimes eliminate the necessity of an organized major overhauling program.

Systems such as this have been used in many mills for years, and this particular one contains nothing new. Your caution is directed to the fact that this program cannot be installed on looms which are in poor mechanical condition. The section men would be swamped with work if each of the items in the outline was checked and fixed, where found necessary. It should be clearly understood that the looms must be in good condition if the program is to operate successfully.

Daily Inspection—The section man should walk over the

job at the beginning of each shift and check his looms for the following items: (1) Is warp tension correct? (2) Is shuttle boxing properly? (3) Are temples and thread cutters set properly and in correct working order?

Friday Inspection—The section man should check all shuttles, pickers, wood binders, front box plate leathers and check straps, each Friday.

During the Week—All filling motion hooks, picker sticks, lug hangers, long and short connectors, and connector blocks should be closely scrutinized during the week. No definite date is specified for this inspection since the section man should be constantly on the alert for these things during his normal travels up and down the weaver's alley, as he goes from job to job.

First Week—The regular weekly inspection schedule begins with inspection of lay swords, rocker shafts and rocker shaft bearings. On the lay sword, the section man should inspect for lost motion due to loose or worn swords and loose, worn or broken set screws, worn or loose bearings and end play.

Second Week—The second week's inspection is made on the take-up motion. Remove oily lint and make sure the clutch opens and closes freely. Inspect for worn shafts and gearing, worn pawls and ratchets. Make sure all nuts and bolts are secured firmly.

Third Week—The protector motion, which is most important, comes under consideration in the third week's in-

Look Behind

VICTOR

MILL

Starch

*the weaver's
friend*

Your Problems Are Our Success

Victor Mill Starches are so noted for uniformity, they are a recognized aid to uniform slashing operations. But that alone can't explain the big preference for Victor Mill and other Keestar products.

Keever goes beyond "delivering the goods." Each sales-service man knows the textile industry. He is a trained specialist in mill problems. He consults with you all down the line utilizing the collective experience of nearly 40 associated textile engineers, chemists and technicians.

The success secret of Keestar products lies in the men who make them — and serve you on the job.

THE KEEVER STARCH CO.
General Offices — Columbus, Ohio
Processors of corn, wheat and blended
starches for industry since 1898

Charles C. Switzer, Vice President

TEXTILE SALES DIVISION

1500 S. C. NATIONAL BANK BLDG.
GREENVILLE, SOUTH CAROLINA

spection. Are long and short rods worn? Is there any lost motion in bearings holding protector rods to lay? Is there proper tension on the spring which holds the protector finger against the wood binder? Is the setting of the dagger to the frog correct? Do the daggers lie even on the back of the frog when the shuttle is out of the box? With daggers against frog steel, is there *at least* $\frac{1}{8}$ -inch more than the width of the shuttle between the reed and the fell of the cloth?

Fourth Week—The fourth week of the regular inspection cycle is reserved for the battery. Inspect the bobbin support, gear, battery disc feed pawl, hold-back pawl for wear and correct setting. Is the box extension binding on the battery? The thread guide condition should be inspected. Does the battery turn freely and lock without play after change of bobbin? Is the transferrer set properly?

Fifth Week—During the fifth week the looms on each section should have crank and cam shaft gears, loomsides and arches inspected. Loomsides should be inspected for any breaks or cracks. Crank and camshaft gears should be observed with worn teeth in mind. Have either of the gears become loose on the shaft? Are the bearings being properly greased? If worn teeth are found, can the pick be turned? The nuts holding loom arches in place should be inspected to assure their security. Are the arches set properly?

Sixth Week—Crank arms, crankshaft bearings and lay guides are inspected during the sixth week of this cycle. Is the crank arm being greased properly? Loose or missing nuts or bolts and the condition of the eccentric pin should be determined. Is the crank arm set properly? The crankshaft bearing should be inspected for loose or worn bearing bolts, caps and cap screws. The lay guide must not be excessively worn and must be getting the proper amount of grease. The lay guide must be tightly in place and the slide must be in good shape if this part is to work correctly.

Seventh Week—Get ready to crawl under the loom again, because during the seventh week the pickshaft and pick ball must be inspected. Is there end play in the pick shaft? Are the bearings worn? Is the pick ball stud worn? Is the pick ball itself in good condition? Is the proper amount of lubricant getting to the pick ball and bearings? Is the pick shaft set with $\frac{1}{8}$ -inch clearance between stop and loomsides when the pick ball is in the highest position? Is this part being lubricated properly.

Eighth Week—The eighth week is reserved for the inspection of the midget feeler. The feeler case should be aligned with the second ring on the bobbin with the shuttle full boxed. With the lay on bottom center is there $\frac{1}{8}$ -inch between bottom of trip and top of lifting lever? Is the lag between lifting lever and trip correct? Is the setting of $\frac{1}{8}$ -inch maintained between an empty quill in the shuttle and feeler tip with connector wire out? Does connector wire bind with full stroke on feeler tip? If so, this is set wrong. Check to make sure the blade does not bind in the feeler case. Is spring in case in good condition and free of oily lint?

Ninth Week—The ninth week's inspection covers the shipper motion and loom brakes. The details of this inspection will vary considerably if looms are belt or motor driven. But generally the things to look for are worn shipper stud, loose shipper stud nuts or threads worn or stripped

on bolts. Does the belt shift off and on the tight pulley properly? What is the condition of the brake lining? Will the brake handle release when the loom is started up? Are the brakes adjusted so that the loom will stop with the shuttle in lefthand box and the harness level when a warp end breaks?

Tenth Week—The parallel motion, picker stick and picker are slated for inspection during the tenth week of the cycle. Inspect closely for pickers which may be loose on stick, worn, turned at an angle or split. Check adjustment of picker to the proper height. Is the picker stick in the center of the slot in the lay end plate? Is the picker stick split or otherwise permanently damaged? Is there any noticeable wear on the parallel shoe or foot? What about the condition of the heel strap? Is it worn, stretched or broken? Are the heel spring and heel spring shell in good condition? Is the proper oil, in the correct amounts, getting to the parallel foot?

Eleventh Week—The 11th week in the inspection cycle is the one in which the harness cams, treadle rollers and jack sticks are inspected, so prepare to do a little more crawling. Are the cams worn to one side or the other? This should not be and will result in a bad shed. Are the treadles and cams lined up so as to pull harness down in a straight line? Are the cams being properly greased? Are treadle rollers working properly and free of oily lint? Inspect for worn treadle rollers or ball bearings in rollers. Are slots in the treadles worn or otherwise damaged resulting in improper seating of treadle roller in treadle? Observe the jack sticks and make sure they are in the proper notch in the treadle. Are jack hooks or screweyes worn or damaged? Split, cracked or excessively worn jacksticks should be replaced, of course. Finally, and most important, are the harness pulling straight?

Twelfth Week—This week's inspection routine will vary extensively from mill to mill because the 12th week is reserved for the inspection of the harness motion. Is the boss roll worn? Is strapping worn, stretched or cracked? What about the condition of boss roll bearings? In the case of spring tops, are the springs in their proper places and free of excessive wear? Inspect to make sure all harness strapping, hooks and screweyes are in good condition. As in the previous week's inspection the section man must determine if the harness are pulling straight.

Thirteenth Week—The 13th week is unlucky only for the let-off motion because it will come in for some extensive inspection during this week. Inspect the pallet and pallet lever studs for wear. Is the brake band worn or oily? Are there any excessively worn teeth on the ratchet wheel? Are there any signs of excessive wear on shafts, studs, control lever and internal gear? Check to make sure the ratchet wheel does not advance more than two teeth per pick on full beam. Is the let-off motion receiving the proper lubrication in the correct amounts? The outside bearing support must be tight and the oil hole must be looking up. If the tension on the brake band is correct, the inspection should be complete.

Fourteenth Week—The 14th and final week is reserved for the most important single item on the loom—the shuttle. The final week of the inspection cycle should begin by inspection to make sure that the leather in the boxes and box binders is good. Be sure that the midget feeler, shuttle feeler or stafford thread cutter is not cutting the shuttle. Inspect the shuttle inside, top, bottom and sides for any

signs of nicks, scratches or cuts. If the policy of your mill dictates the use of shuttle fur and bristles, check them during the 14th week. All bristles and fur should be in good shape since this is part of the every week inspection and is checked every Friday. Is the shuttle eye tight and completely smooth? Is the shuttle spur tight and free from burrs? The quill clip must be tight and strong enough to hold the quill firmly in place. Mix a batch of shellac and oil compound and rub into the shuttle, after squaring and

sanding. Then to top it off, rub the shuttle good with tallow before replacing in the loom.

Repeat the Cycle—When the first 14-week cycle is completed, of course, the section man starts his inspections all over again. The second time around will be a lot easier than the first. By the third time around there will be very little actual work to do, just inspecting. Preventing the breakdown before it happens is really the most rewarding part of the loomfixer's job.

Proper Battery Filling Pays Off

Good battery filling can help eliminate grouchy loomfixers and grumpy weavers as well as mispicks, breaks at transfer, stopping on transfer, etc. Here are some ideas which point up the fact that battery filling is an important job which requires skill, dexterity and intelligence.

WHEN properly executed, the battery filler's job can be one which leads, directly, to higher weave room efficiency and lower seconds. If this job is not properly executed, the exact reverse is true and, it may be added, there are few individual jobs which can be as detrimental to the entire mill's operation. This sketch on the proper operation of the battery filler's job is intended to be only a guide to the weave room supervisor, since every mill presents a different set of conditions, thereby necessitating different procedures.

What are the results of improper execution of the battery filler's job? A badly filled battery can cause mispicks, the dirge of every weave room. A badly filled battery can cause filling breaks at the transfer, stopping looms and lowering efficiencies. This sub-standard condition can cause shuttles to fail to thread up properly after the transfer is completed. Second quality cloth is made when oily or dirty filling is inserted into the battery. Grouchy loomfixers and grumpy weavers, a condition not conducive to good weave room operation, can be caused by poor battery filling. Of course, this is part of the human aspect to the operation and not strictly mechanically speaking. Poor battery filling can and does directly contribute to excessive thread waste and poor housekeeping. There are many other results of poor battery filling which need not be gone into at this time. However, the point is that proper battery filling pays off in the weaving operation.

What are the requisites to good battery filling? For one thing, the battery filler must be a person who tends toward cleanliness. This is a job which, for best results, requires clean hands and the desire to get the quill of filling out of the box or bin, into the buggy or other filling transporting device and into the battery without dropping it on the floor or getting it oily or dirty in any other way. This must be done with speed.

Much has been written by outstanding loom authorities on the setting of the battery for proper operation. Therefore this phase will not be entered here. However, very

simply, the bobbin disc and thread guide must be aligned so that the threads, between disc and guide, are parallel to the breast beam and there are approximately one and one-half inches of slant between the guide and the thread holder. The battery filler's job cannot be well executed unless this condition is met.

If battery fillers employ the use of filling buggies, as is the case in many mills, steps should be taken to insure the buggy is not filled to overflowing. Figure 1 shows a battery filler who has a properly filled buggy. This filling will end up in the battery, where it should, and not on the floor or under the loom in an oil spot. When the buggy is filled with quills of filling piled over the edges, it is simply not physically possible to keep some quills from falling on the floor at one time or another. The same condition is true for mills which have looms which are equipped with filling boxes. These loom boxes are always subject to vibration when the loom is running. Quills of yarn will spill out of a loom box which is piled too full. The



Fig. 1—This battery filler has a properly filled buggy. The filling is not likely to fall on the floor and become soiled.

AT REDUCED PRICE

Stories of Cotton Mill Life

by

Mrs. Ethel Thomas Dabbs (Aunt Becky)

For Her Children's Sake

***From Ball Room To Weave Room**

Truth Crushed To Earth

The Way Of A Woman

***Hearts Of Gold**

Tangled Threads

***Alice In Blunderland**

Driven From Home

Now, While They Last, Only

**50c Per
Copy**

(Regular Price \$1.00)

All books bound in cloth except the three marked with *asterisk—Some are slightly soiled.

CHECK OR MONEY ORDER MUST ACCOMPANY ALL ORDERS FOR BOOKS. DO NOT SEND CASH.

CLARK PUBLISHING COMPANY

P. O. BOX 1225 • CHARLOTTE 1, N. C.

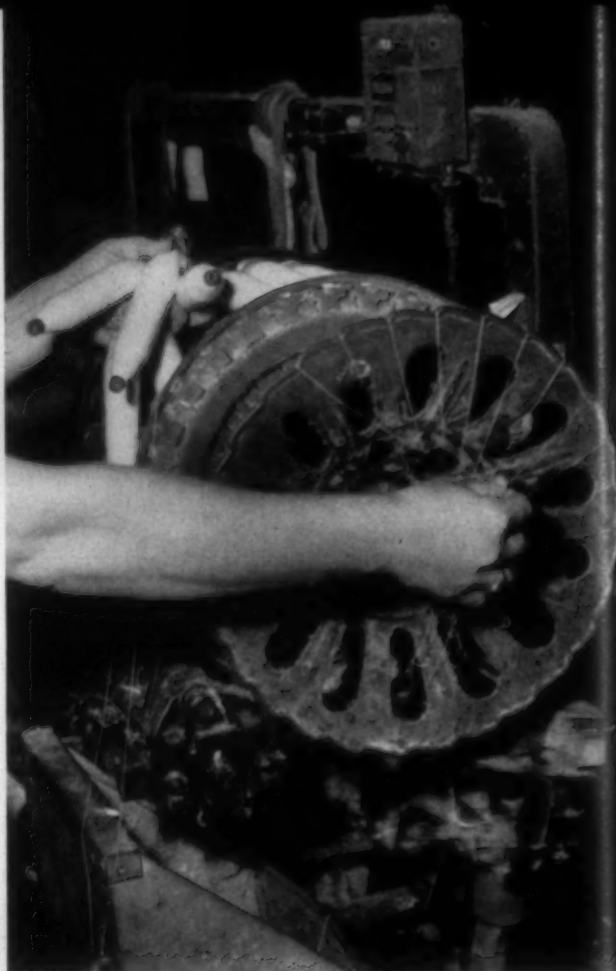


Fig. 2—This battery filler has five quills of filling in her left hand. This may be a comfortable load for some people and an overload for others. Attempts to overextend oneself may lead to filling dropped on the floor and becoming soiled.

result is soiled yarn, money wasted and due plainly to human oversight.

The battery filler should take quills of yarn out of the buggy or box with the left hand. The battery filler in Figure 2 has five quills in her left hand. This is a comfortable load for many people, but too much of a load for others. Attempting to over-extend oneself may lead to the dropping and soiling of yarn. This is a point which should be subject to close consideration.

The tails are pulled from the quill of filling with the right hand. The length of tail should be just enough to make about three or four wraps around the thread holder. Since a battery filler may be plugging as many as 700 quills an hour, it is obvious that excessive waste may be caused by pulling off too much tail. Also, difficulty is encountered if the tail is too short. The short tail will not wrap around the thread holder enough times to insure the thread staying tight until transferred into the loom. A bagging end is likely to be snagged and broken by the action of the lay as the quill rotates toward the transfer position.

After the battery filler has pulled off the proper length of tail, the quills are plugged into the bobbin disc with the left hand. The right hand is, in the meantime, employed with matching up the tails with the proper notches on the thread guide. When this is completed, the battery filler should wrap, tightly, the tails around the thread holder three or four times. The tails are then broken off close to

the thread
is deposited
yarn off the
eral appear
bits of yarn
on the batte

Before le
check to so
the thread
fingernail,
more of the
broken end
working p
if the fillin

The thro
the count c
holder sho
this condit
until the q
ing period
ever, a goo
divide the

How go
finishes
ing is a
T. F. C
at last
sponsor

WRI
ha
and an ac
work was
developm
tion of n
Next can
followed
formalde
tance are
mine for

A bett
be possib

TEXTILE

the thread holder and the bunch remaining in the hand is deposited in the quill can. This keeps the bunches of yarn off the floor, which improves the weave room's general appearance as well as cutting down the possibility of bits of yarns becoming entangled and choking the wheels on the battery filler's buggy.

Before leaving a loom battery filled the operator should check to see that none of the ends of filling wrapped around the thread holder have been broken. Many times a rough fingernail, watch band, ring or other object will snag one or more of the threads near the thread holder. Of course, this broken end will cause a loom stop if the filling motion is working properly. A mispick or broken pick will result if the filling motion is not adjusted properly.

The thread holder should be cleaned off as often as the count of yarn used dictates. The bunch of yarn on the holder should not be allowed to become big and soft since this condition will not permit the threads to remain tight until the quill is transferred into the shuttle. This cleaning period will vary considerably from mill to mill. However, a good method of assuring this job being done is to divide the batteries among the shifts running so that each

filler is responsible for a certain number of batteries. The bunches of yarn cleaned off the thread holder should be deposited into the quill can for obvious reasons.

Among the other duties outlined, the battery filler should also be an inspector. The battery fillers get to handle every single quill of filling made in the spinning room. Inspection should be made, just at a glance, for bad bunches, bad build, mixed filling and other defects in the yarn. This bad filling should be turned over to the weave room supervisor who can return it to the spinning room, so that corrective measures can be taken.

The inspection of yarns is quite difficult, particularly, when working at the speed of most battery fillers. This is an important reason for the necessity of training of the new battery filler by the supervisor. This is the reason the new battery filler should not be put on a job with another learner or with an experienced hand until she gets up enough speed to run a job by herself. It takes more than speed to run this job. It takes skill, dexterity and intelligence to run a battery filler's job properly. And, the mill that gets the correct blend of these characteristics will be well repaid for its effort.

Bleaching, Dyeing & Finishing

A Comparison Of

Wrinkle-Resistant Finishes

For Cotton

By DR. T. F. COOKE, Textile Resin Department, American Cyanamid Co.

How good are the various wrinkle-resistant finishes in relation to each other? The following is abstracted from a paper delivered by T. F. Cooke of the American Cyanamid Co. at last Fall's Chemical Finishing Conference sponsored by the National Cotton Council.

WRINKLE-RESISTANT finishes on cellulosic fabrics had their start with the use of urea formaldehyde and an acid forming ammonium salt accelerator. The early work was primarily on rayon fabrics. The second important development in the wrinkle-resistant field was the application of melamine formaldehyde to both rayon and cotton. Next came the use of the alkanol amine salt accelerators followed by the modified urea formaldehyde (ethylene urea formaldehyde). The more recent developments of importance are metallic salt accelerators and the modified melamine formaldehyde.

A better understanding of wrinkle-resistant finishes may be possible by briefly reviewing the chemistry of urea and

melamine formaldehyde and possible mechanisms for explaining how wrinkle resistance is obtained. Urea and melamine formaldehyde have been termed "thermosetting resins." Ethylene urea formaldehyde has been called both a "resin" and a "cellulose reactant." Actually, in the form used for wrinkle-resistant finishes, these products are not resins but chiefly monomeric chemicals capable of both resin formation and reaction with cellulose.

Urea formaldehyde, dimethylol urea, is tetra functional, having four reactive positions which are the two hydroxyl groups and the two hydrogens attached to the two nitrogen groups. Melamine formaldehyde, trimethylol melamine, is hexafunctional having six reactive positions which are the three hydroxyl groups and the three hydrogens attached to the amino nitrogens. Ethylene urea formaldehyde is difunctional, having two reactive groups which are the two hydroxyl groups. An ethylene urea formaldehyde linear polymer was formed by merely heating an aqueous solution of monomeric ethylene urea formaldehyde at 130 to 135 degrees F. No accelerator was used since it would interfere with the subsequent molecular weight determination made on the product. In four hours a product with an average

molecular weight of 2,500, corresponding to a linear polymer averaging 17 units long, was formed.

The monomeric urea formaldehyde may condense with itself to form polymers. Molecules of dimethylol urea may condense to form a linear trimer. This condensation reaction can, of course, continue in the same manner to form a chain polymer. Molecules of dimethylol urea may condense to form a ring trimer. Further condensation in this manner is, of course, possible with the formation of a polymer of ring trimers. It is obvious that polymers of a variety of structures are possible with the condensation of urea formaldehyde monomers to form chain or ring polymers or combinations of the two. Similar chain and ring polymers can be formed from melamine formaldehyde monomers.

Melamine, urea and ethylene urea formaldehyde can react through the methylol group with an hydroxy group of cellulose by means of an ether linkage. Infra-red spectra of melamine formaldehyde-treated cellophane films have indicated that such a chemical reaction may occur. It has been postulated that the "resin" molecules of "reactants" cross link adjacent cellulose chains in the amorphous regions within a cotton fiber.

Although it is conceivable that wrinkle resistance could be obtained as the result of resin formation within the cotton fiber, it is believed that it primarily results from cross-linking between adjacent cellulose chains. Such a cross-linking process would tend to prevent the cellulose chains from slipping irreversibly past one another under the influence of an applied stress. The prevention of this irreversible slippage reduces the permanent set of a cellulosic fiber, thereby increasing its elasticity and imparting wrinkle resistance. This increase in elasticity of the fiber is carried through to the fabric which gives the load extension curves for the untreated and urea formaldehyde counterparts.

The resins involved in this comparison include the most extensively used types. The concentration of these products applied to the fabric varies over a wide range to include not only the normally used concentrations but lower and higher solids as well. These resins are shown in Table 1.

TABLE 1

Resin	Designation	% on Wt. of Fabric
Urea Formaldehyde	UF	4-20
Ethylene Urea Formaldehyde	EU	2-11
Melamine Formaldehyde	MF	2-11
Modified Melamine Formaldehyde	Modified MF	2-11

Accelerators Used

The accelerators involved in this comparison include the most extensively used types. The accelerators were applied at those concentrations generally found to give optimum wrinkle recovery values as shown in Table 2.

Each resin was applied with each of the accelerators, for purposes of this comparison; thus a total of 12 resin accelerator systems were studied. The resins were applied to bleached, unmercerized, 80x80 cotton fabric. The treated fabric was dried and then cured at temperatures of 275 to 365 degrees F. Drying and curing times varied from 0.75

TABLE 2

Accelerator	Chemical Composition	% on Resin Solids
Ammonium Salt	Ammonium Sulphate	3.5
Alkanol Amine Salt	2-amino-2-methyl propanol-1-hydrochloride	7
Metallic Inorganic Salt	Magnesium Chloride	12

to 8.25 minutes. The time and temperature of cure were chosen to represent not only those conditions usually considered optimum but also conditions of less as well as more cure.

The data used in this comparison were obtained by statistical means. The actual experiments were statistically designed to afford maximum efficiency for every individual experiment as well as to insure the most accurate, precise and unbiased data. The design was of such a nature as to exclude errors which are normally encountered in experimental work. Some of the errors which were eliminated by a cancelling out effect are the errors due to differences in the physical properties of the fabric used for treatment; variations in processing equipment from day to day; fluctuation in apparatus as well as differences between operators used in the application and the testing of the treated fabrics.

Wrinkle Recovery

The effect of accelerator on the wrinkle recovery was found to be as follows: (1) ammonium salt gives the lowest wrinkle recovery value for each resin; (2) metallic inorganic salt is the most efficient for the MF; (3) alkanolamine hydrochloride is the most efficient for the Modified MF; (4) all three accelerators are effective for EU with the alkanolamine hydrochloride being slightly better than the ammonium salt, while the metallic inorganic salt is slightly superior to the alkanolamine hydrochloride.

The comparison shows the EU gives the highest wrinkle recovery and UF gives the lowest wrinkle recovery. The wrinkle recovery values with UF reach a maximum at 12 to 15 per cent solids and then decline. This decrease is probably due to acid hydrolysis of the easily hydrolyzed UF at the high accelerator concentration used at high concentration of resin.

The melamine resins give intermediate wrinkle recovery values. When the alkanolamine hydrochloride accelerator is used with the modified MF, however, essentially the same wrinkle recovery is obtained as found with the EU. There are four possible explanations for the difference in wrinkle recovery values obtained for a given weight concentration of resin. These explanations are: (1) the relative amounts of resin inside the fiber and outside the fiber caused by differences in size of the resin molecules; (2) the difference in the molecular weight of the monomers; (3) the amount of resin polymerized within the fiber compared to that reacted with the cellulose; and (4) the difference in the length of cross link between adjacent cellulose chains.

The maximum wrinkle recovery obtained with a given resin and accelerator combination at five per cent solids is summarized in the bar graph, Figure 1. This summary shows that the metallic inorganic salt gives a wrinkle recovery value equal to or greater than that obtained with the other accelerators with all four resins. The ammonium salt accelerator gives the lowest wrinkle recovery for all the resins except for EU where it is equal to that obtained with

the metallic inorganic salt. The modified MF and EU resins give the highest wrinkle recovery while the UF gives the lowest wrinkle recovery. In interpreting the data in Figure 1, one must be careful in view of the fact that while maximum recovery may have been obtained, other fabric properties may have been rendered unsatisfactory.

Tensile Strength

The effect of resin finishing on tensile strength has been the subject of considerable study. UF and MF finishes have higher strength than the other resins at any given solids. The EU finish has the lowest strength. The results of this comparison support the view of most of the work that has been published which comes to the general conclusion that as the wrinkle recovery is increased, the tensile strength is decreased. Many references state that there is a direct relationship between these two properties.

The EU and modified MF finishes have a lower tensile strength than the other finishes at equal wrinkle recovery values. In general the rate of strength loss with increasing wrinkle recovery is greater for EU than for modified MF. With the metallic inorganic salt accelerator, it is interesting to note that the graph for the MF finish shows that there is no appreciable change in strength as the wrinkle recovery increases. The strength (warp plus filling) remains fairly constant to about 58 to 60 pounds. These data indicate that when the tensile strength of the treated fabric is a critical factor, the MF with the metallic inorganic salt should be considered for finishing the fabric.

Two possible explanations for the differences in the tensile strength-wrinkle recovery relationship are: (1) physical bonds, caused by polymer formation within the cotton fiber rather than covalent chemical bonds across adjacent cellulose chains; (2) the difference in the length of cross linking bonds.

Tear Strength

There is no correlation between tear strength values and wrinkle recovery until the fabrics are mechanically manipulated by dry tumbling to break down the stiffness. There are no large differences in the wrinkle recovery and tear

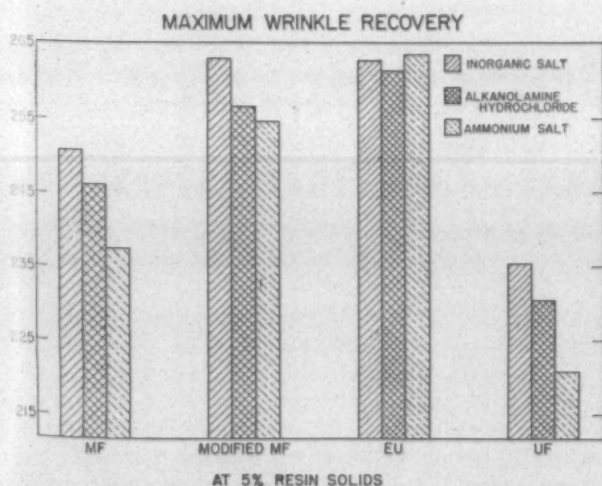
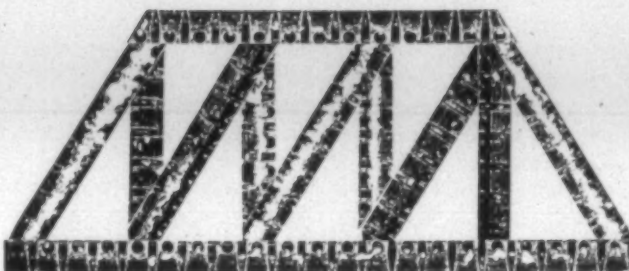


Fig. 1—This bar graph shows a summarization of the maximum wrinkle recovery obtained with a given resin and accelerator combination at five per cent solids.

bridges



A bridge is a roadway over an obstacle. The obstacle may be a ravine, a river, even another road. But it is basically a means of completing the job without trouble.

Ordinarily, all we see of the bridge is the roadway itself. If it's smooth and wide, we like it; if it's rough or narrow, we don't. But we never give a thought to the real strength of a bridge: the supporting columns.

Without the structure to support it, the smooth, broad roadway would be in the river—we'd have no bridge at all!

So it is with dyes. The color itself is fine, but only a means of completing the job. What good would the dye be if there were no thought given to developing the dye for the specific purpose; if there were no one to guide the hand of the user? Dyes alone are good, but they're much better when backed up by the proper support.

So to bridge the gap between greige goods and finished cloth, call on Sandoz. We supply quality products supported by objective basic research and expert application counsel.

SANDOZ, INC., 61-63 Van Dam Street,
New York 13, N. Y. ALgonquin 5-1700.



SANDOZ

strength relationships for the different systems in the comparison.

Discoloration

A fabric may discolor during resin treatment or during washing in the presence of chlorine bleach. Initial yellowing, which results from curing not chlorine bleaching, is affected by the temperature of the curing cycle. In general, the degree of initial yellow tends to increase with increasing temperature. The rate of increase and the degree of yellowing is lowest when the metallic inorganic salt accelerator is used. At the higher temperatures EU generally yellows more so than the others.

The degree of initial yellowing increases also with increasing curing time. Again it is found that resins applied with the metallic inorganic salt yellow the least. EU finished fabric yellow more than the other resin finishes when alkanolamine hydrochloride and ammonium salt accelerators are used.

Melamine resin-finished fabrics show discoloration due to chlorine washing (not initial yellowing). EU and UF finishes were found not to yellow with chlorine washing. In the MF finishes, increasing the curing temperature or time generally decreases yellowing due to chlorine. Also significant in the discoloration comparison is the fact that the use of the metallic inorganic salt results in much less yellowing due to chlorine retention than the other accelerators under the same curing conditions.

Summary

The EU finishes generally have the highest wrinkle recovery for a given resin solids, and the UF the lowest. The melamine resins are intermediate with the modified MF equalling the EU under optimum curing conditions. Of the four resins studied, the EU is the fastest and the MF the slowest to cure. The modified MF and UF are intermediate in this respect.

The durability to chlorine washing of the melamine resins is considerably greater than that of the EU or UF resins.

The MF and UF finishes generally have a higher tensile strength than that of the modified MF and the EU finishes for a given wrinkle recovery. The melamine resin treated fabrics show little loss in strength on continued washings in the presence of chlorine. The tensile strength of the UF-treated fabric decreases rapidly with successive washes in the presence of chlorine. The EU-finished fabric did not decrease and in some cases, increased in tensile strength on continued chlorine washing.

There is little loss in strength with the A.A.T.C.C. accelerated chlorine test with EU and melamine resin-treated fabrics that have been satisfactorily cured. With the UF-treated fabric, most of the strength was lost under these conditions.

The initial yellowing of the treated fabric during curing is generally greater with EU than with the others. There is no yellowing of EU or UF and very little yellowing of the modified MF-treated fabric during continued washing in the presence of chlorine, but MF-treated fabric does yellow.

There is little difference between the resins from the standpoint of the tear strength of the treated fabric for a given wrinkle recovery.

The ammonium salt, in most cases, is shown to be the poorest accelerator in the comparison. The metallic inorganic salt accelerator shows itself superior to the alkanolamine hydrochloride; however, the alkanolamine hydrochloride accelerator provides more rapid cure than the metallic inorganic salt accelerator. The metallic inorganic salt gives outstanding results with MF. Under certain conditions, the alkanolamine hydrochloride gives superior wrinkle recovery with modified MF; however, from the standpoint of initial color and the effect of chlorine on the treated fabric, the metallic inorganic salt is generally superior to the other accelerators.

The conclusions summarized here are general in nature and should be considered only as a tool for the finisher's use in the search for the best combination of resin-accelerator-curing conditions for the particular properties desired in the individual fabric.

Paperwork Seminar

Modern Office Units Improve Production Control Techniques

By B. A. SCHAEFFER, Cranston Print Works Co.

This paper deals with the use of Multilith machines in maintaining production records and control. The system was described by Mr. Schaeffer during a recent series of paperwork seminars sponsored in various textile centers by the Addressograph-Multigraph Corp.

SINCE Cranston Print Works Co. opened its plant at Fletcher, N. C., in 1949, there has been a constant

steady growth. It has been imperative that administration stay abreast of production. At the outset, the operation was controlled primarily by hand posting and manual operations. However, plant production increases required an increase of office production. More controls were necessary and at an increased tempo.

Of course, during this period much administrative equipment was added. It can be said, with assurance, that with all the additional equipment the Multilith machines are rated very highly. They are used for production records and

Fig. 1—8½x12-inch Multilith Master, preprinted with reproducing form.

control and also for many other administrative jobs. The Multilith Offset Duplicator gives us fast action copies within several minutes after the receipt of a customer's order. This speed, as you realize, is very important in our production and control operations.

Basically the purposes of our production and control procedures are to: (1) provide action copies with complete information as the goods travel through processing, thus eliminating all shapes and sizes of partial records and the resultant confusion; (2) provide highly legible and pertinent records on paper or card stock, in any quantity desired;

(3) provide a method whereby the production department can tell the location of any given process order. We have been using the Multilith Offset Process since July of 1953 to accomplish these objectives.

Our procedures in the plant begin with the receipt, logging and recording of a customer's order. Pertinent internal process information is added to the order and it is then forwarded to a clerk-typist. A production order Systemat Master (Fig. 1) is then typed to interpret the customer process order into our production information requirements. In the center of the master, you will note the scheduling operations which are "gray," "can," "soften," "nap," "frame," etc. These are checked in pencil on the master and determine the distribution of duplicated copies. This is an important step in the whole operation. After proofing, the master goes to the Multilith operator who duplicates the copies shown (Fig. 2). The duplicated copies are then distributed.

The starch, folding and packing department cards are yellow and have the upper right hand section torn on perforations. These torn sections are sent to the production department as each stage of processing is completed. The tabs are posted to a production control board. In this manner, the production control can tell the exact location of any order being processed.

The lower left hand corner of the yellow card is also perforated. The customer's order number, yardage and pattern code is recorded in this area. This tab is torn out and filed in the department upon completion of the operation in order that a complete record of departmental weekly production is kept.

In addition, the soap and starch department copies are duplicated again, on the reverse side (Fig. 3), so that

Fig. 2—There is one 8½x11-inch green copy duplicated for each schedule box checked.

Yellow card stock copies with perforated areas in upper right corners and lower left corners.

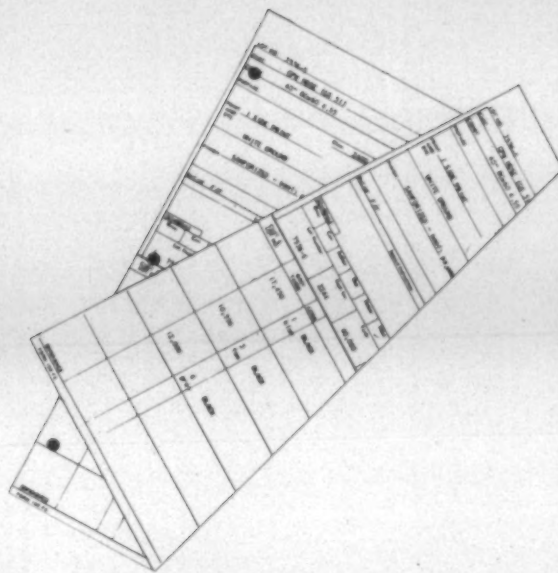
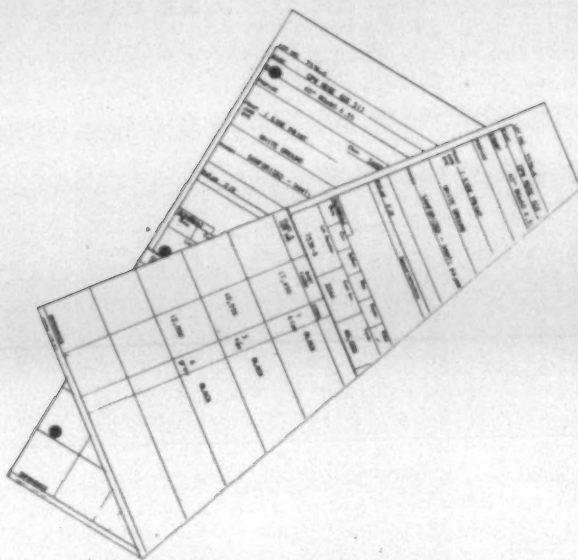


Fig. 3—Identical production information is duplicated on both sides of copies for use when orders are to be re-run.

identical information is on both sides of the sheet. Thus, the necessary records are provided in the event re-runs are ordered.

To eliminate various separate records in departments,

several of the duplicated copies have been imprinted on the reverse sides with forms to record processing information. Thus considerable paper shuffling is avoided and single purpose copy is converted to multiple copy use.

Maintenance, Engineering & Handling

Thermometers And Pyrometers

By LEO WALTER, Consulting Engineer

In this article the author points out that many incorrect thermometer readings are not the fault of the instrument itself but stem from the fact that they are either inadequate for the application for which they were chosen; are not correctly installed; or have received little or no maintenance.

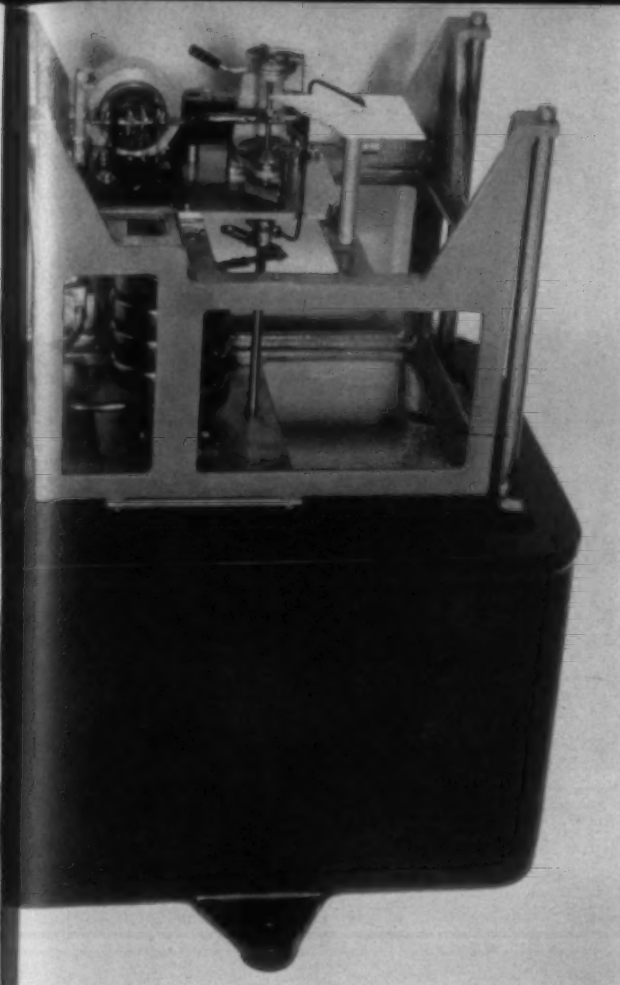
SELECTION of the right thermometer is not always an easy job. In one instance a simple mercury-in-steel dial thermometer may suffice, but in another case an elaborate electronic temperature recorder may be required. Instrument engineers from reputable instrument makers will usually advise as to the best suitable types, but in important instances the unbiased advice of a consultant should be sought. A point which is often overlooked by the user of new plant equipment is to specify, when ordering, the best suitable instrument types. It sometimes happens that new plant equipment is delivered fitted only with indicating dial thermometers, where for all practical purposes more accurate temperature recorders should be used. Machinery manufac-

turers leave it often to the future users to acquire recording instruments themselves, but they fail to say so, and costly machinery goes into operation with inadequate instrumentation.

Surveys disclose the fact that sometimes the most costly equipment is run on the cheapest type of dial thermometer on the market.

Types of Instruments

It is assumed that the design and function of simple indicating and recording thermometers are familiar to the reader. Mechanical thermometers, making use of expansion or contraction of an enclosed liquid or gas volume, or of a temperature sensitive solid material (bi-metal) have for many years been in practical use and very well known. The electrical thermometer, either in form of resistance instruments, requiring an outside source of electricity for their operation (battery or electric main transformer), or used as thermocouple instrument are also widely used. These types will be chosen where accurate measurement is required, and where a skilled person is available to look after them. A



Modern electronic thermometer showing mechanism and electronic valve unit exposed for servicing.

well-trained plant electrician is often very suitable for this job.

In the last few years, electronic thermometers have also come into wider use. They have the advantage of having small instrument time lags. That is, they are sensitive, quick acting and accurate. These instruments are based on use of electronic valves for magnification of the minute current which comes from the temperature measuring element. Design and function vary, but maintenance is no more difficult than for other electric types.

The exact function of an electronic tube in electronic thermometers or pyrometers is not always fully understood by the user, but it can be quite simply explained. As is well known, the hot junction of a thermocouple, as used in electric thermometers and pyrometers, produces only a very minute current. What the electronic tube performs is an instant and accurate magnification of this measuring current. It does it without any moving parts, and without retardations and delays. The inclusion of electronic tubes enabled the designer of modern electronic pyrometers using a thermocouple element to provide better measurement, without adding complications to a simple electrical circuit.

In mechanical thermometers (liquid or gas-filled) a number of mechanical elements have to move during the measuring action. Minor deformations of levers and of gears may falsify accurate temperature measurements of a mercury-in-glass or of a bi-metallic pyrometer. Springs may develop what is known as "fatigue." Worn-out pivots may produce dead movement of the thermometer mechanism whereby

the instrument pointer stands still in spite of changing measured temperature. A rack and pinion mechanism of a mechanical thermometer may wear out as time goes by, and other causes of trouble might develop if less suitable materials have been used within the thermometer mechanism.

The electronic tube is better off in many respects than a mechanical mechanism. It lasts a very long time, and because of absence of moving parts has very little wear and tear. Whereas a faulty mechanical thermometer has often to be returned to the manufacturer for repair and recalibration, in a modern electronic pyrometer having plug-in-units a faulty electronic tube can easily be replaced by the plant electrician by simply plugging in a spare tube taken from stock.

Junction-Transistor

In recent times another device has made its appearance which might one day replace the electronic tube in many instances. The junction-transistor in its latest form is completely sealed, requires no heater energy as does the electronic tube, and performs the same duty—namely, quick and accurate magnification of an electric measuring current. In its present form, transistors are only potential rivals for electronic tubes, but after development they will find wider use in instrumentation, as they already do in radio.

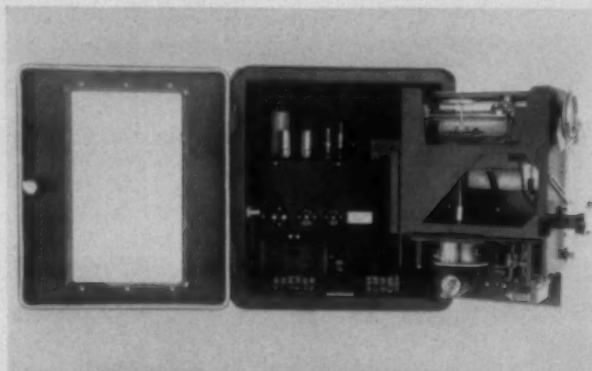
Installation Hints

Sometimes a thermometer is blamed for faulty working because it was improperly installed. A few hints might cure some of the troubles from this cause.

First, read the manufacturer's installation instructions carefully. Where such instructions are not made available, ask for them. Always check to see that the temperature sensing element (thermometer stem, sheath, thermocouple, etc.) has been correctly installed.

The problem of temperature measurement and location is seldom really difficult. In the case of measuring temperature of a liquid, all that is necessary is to see that the thermometer stem is inserted where an average liquid temperature can be expected. It might need some experimentation to find this point, but it is worth the trouble. For temperature measurement of air or gas, a longer thermometer stem is advisable because heat transmission from a gaseous fluid to the fluid or the electrical resistance wire or thermocouple junction inside the thermometer stem is slower than from a liquid.

The influence of movement of the measured fluid on reaching the final measured temperature is quite consider-



An inside look at an electronic temperature recorder.

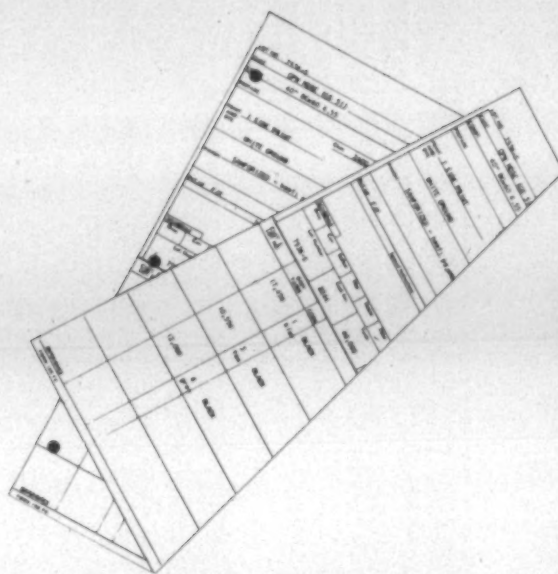
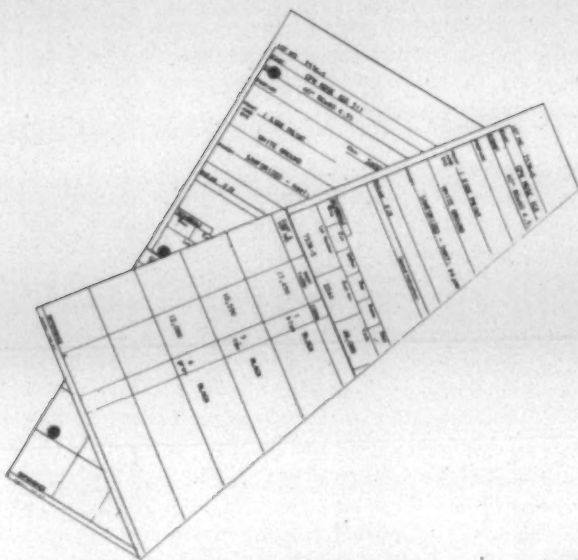


Fig. 3—Identical production information is duplicated on both sides of copies for use when orders are to be re-run.

identical information is on both sides of the sheet. Thus, the necessary records are provided in the event re-runs are ordered.

To eliminate various separate records in departments,

several of the duplicated copies have been imprinted on the reverse sides with forms to record processing information. Thus considerable paper shuffling is avoided and single purpose copy is converted to multiple copy use.

Maintenance, Engineering & Handling

Thermometers And Pyrometers

By LEO WALTER, Consulting Engineer

In this article the author points out that many incorrect thermometer readings are not the fault of the instrument itself but stem from the fact that they are either inadequate for the application for which they were chosen; are not correctly installed; or have received little or no maintenance.

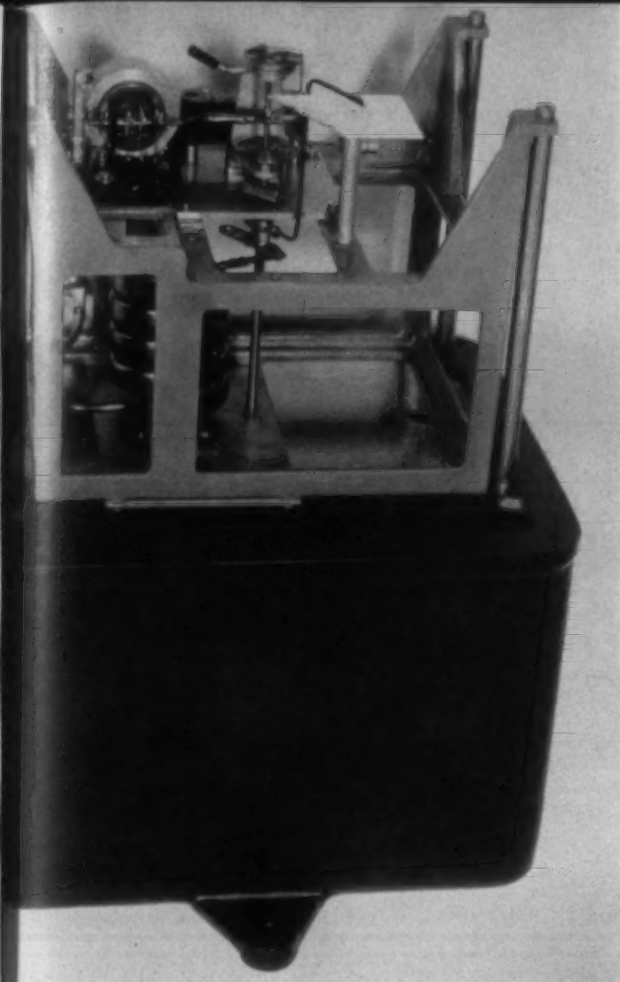
SELECTION of the right thermometer is not always an easy job. In one instance a simple mercury-in-steel dial thermometer may suffice, but in another case an elaborate electronic temperature recorder may be required. Instrument engineers from reputable instrument makers will usually advise as to the best suitable types, but in important instances the unbiased advice of a consultant should be sought. A point which is often overlooked by the user of new plant equipment is to specify, when ordering, the best suitable instrument types. It sometimes happens that new plant equipment is delivered fitted only with indicating dial thermometers, where for all practical purposes more accurate temperature recorders should be used. Machinery manufac-

turers leave it often to the future users to acquire recording instruments themselves, but they fail to say so, and costly machinery goes into operation with inadequate instrumentation.

Surveys disclose the fact that sometimes the most costly equipment is run on the cheapest type of dial thermometer on the market.

Types of Instruments

It is assumed that the design and function of simple indicating and recording thermometers are familiar to the reader. Mechanical thermometers, making use of expansion or contraction of an enclosed liquid or gas volume, or of a temperature sensitive solid material (bi-metal) have for many years been in practical use and very well known. The electrical thermometer, either in form of resistance instruments, requiring an outside source of electricity for their operation (battery or electric main transformer), or used as thermocouple instrument are also widely used. These types will be chosen where accurate measurement is required, and where a skilled person is available to look after them. A



Modern electronic thermometer showing mechanism and electronic valve unit exposed for servicing.

well-trained plant electrician is often very suitable for this job.

In the last few years, electronic thermometers have also come into wider use. They have the advantage of having small instrument time lags. That is, they are sensitive, quick acting and accurate. These instruments are based on use of electronic valves for magnification of the minute current which comes from the temperature measuring element. Design and function vary, but maintenance is no more difficult than for other electric types.

The exact function of an electronic tube in electronic thermometers or pyrometers is not always fully understood by the user, but it can be quite simply explained. As is well known, the hot junction of a thermocouple, as used in electric thermometers and pyrometers, produces only a very minute current. What the electronic tube performs is an instant and accurate magnification of this measuring current. It does it without any moving parts, and without retardations and delays. The inclusion of electronic tubes enabled the designer of modern electronic pyrometers using a thermocouple element to provide better measurement, without adding complications to a simple electrical circuit.

In mechanical thermometers (liquid or gas-filled) a number of mechanical elements have to move during the measuring action. Minor deformations of levers and of gears may falsify accurate temperature measurements of a mercury-in-glass or of a bi-metallic pyrometer. Springs may develop what is known as "fatigue." Worn-out pivots may produce dead movement of the thermometer mechanism whereby

the instrument pointer stands still in spite of changing measured temperature. A rack and pinion mechanism of a mechanical thermometer may wear out as time goes by, and other causes of trouble might develop if less suitable materials have been used within the thermometer mechanism.

The electronic tube is better off in many respects than a mechanical mechanism. It lasts a very long time, and because of absence of moving parts has very little wear and tear. Whereas a faulty mechanical thermometer has often to be returned to the manufacturer for repair and recalibration, in a modern electronic pyrometer having plug-in-units a faulty electronic tube can easily be replaced by the plant electrician by simply plugging in a spare tube taken from stock.

Junction-Transistor

In recent times another device has made its appearance which might one day replace the electronic tube in many instances. The junction-transistor in its latest form is completely sealed, requires no heater energy as does the electronic tube, and performs the same duty—namely, quick and accurate magnification of an electric measuring current. In its present form, transistors are only potential rivals for electronic tubes, but after development they will find wider use in instrumentation, as they already do in radio.

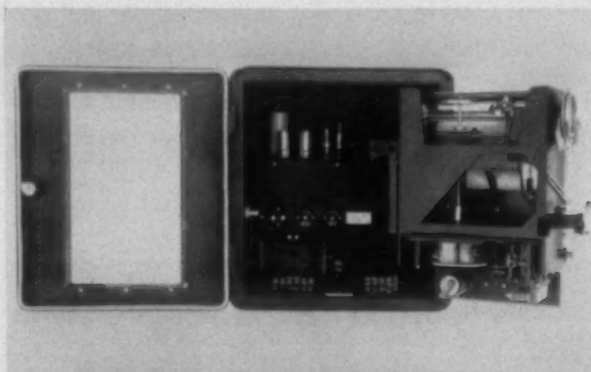
Installation Hints

Sometimes a thermometer is blamed for faulty working because it was improperly installed. A few hints might cure some of the troubles from this cause.

First, read the manufacturer's installation instructions carefully. Where such instructions are not made available, ask for them. Always check to see that the temperature sensing element (thermometer stem, sheath, thermocouple, etc.) has been correctly installed.

The problem of temperature measurement and location is seldom really difficult. In the case of measuring temperature of a liquid, all that is necessary is to see that the thermometer stem is inserted where an average liquid temperature can be expected. It might need some experimentation to find this point, but it is worth the trouble. For temperature measurement of air or gas, a longer thermometer stem is advisable because heat transmission from a gaseous fluid to the fluid or the electrical resistance wire or thermocouple junction inside the thermometer stem is slower than from a liquid.

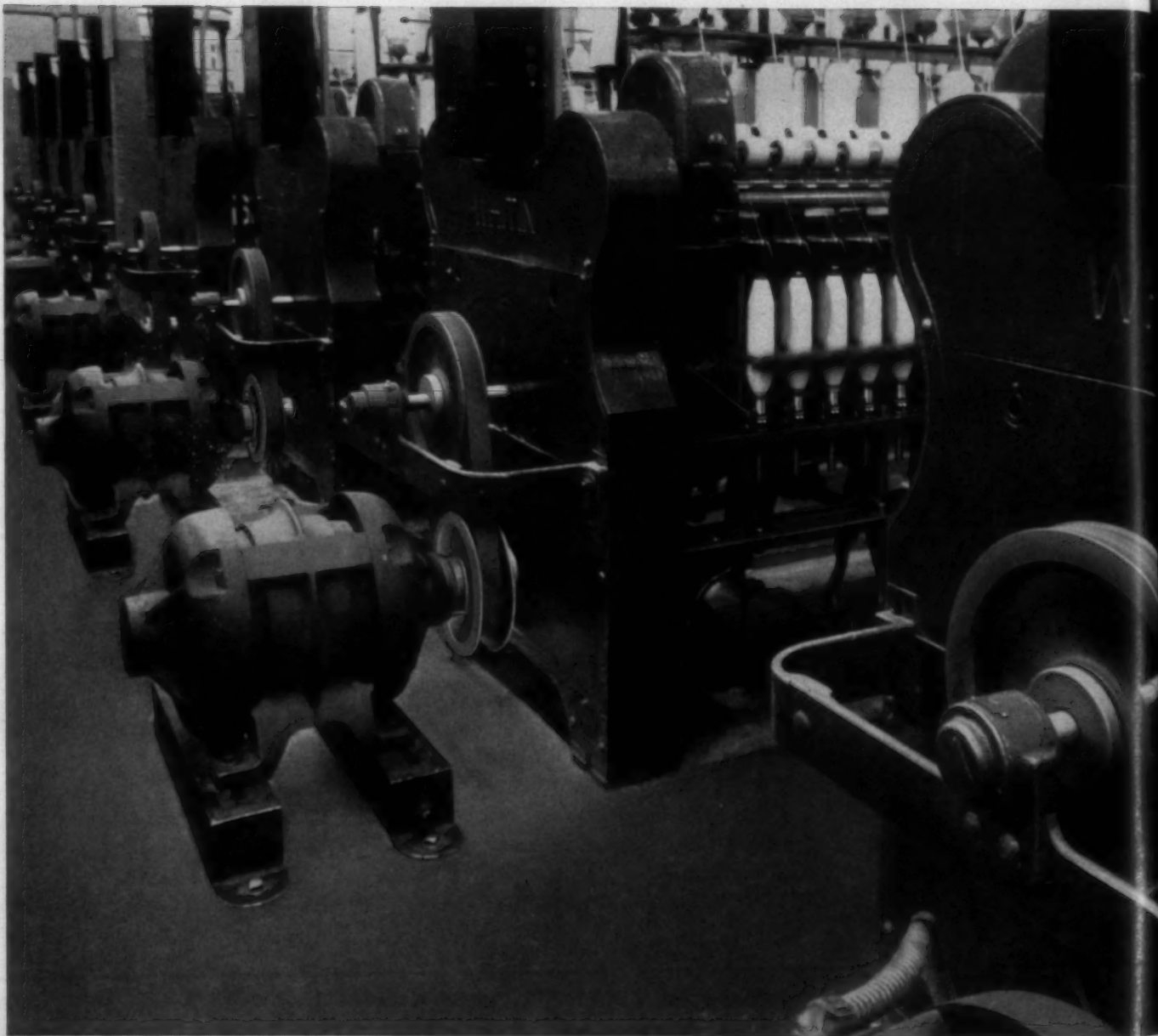
The influence of movement of the measured fluid on reaching the final measured temperature is quite consider-



An inside look at an electronic temperature recorder.

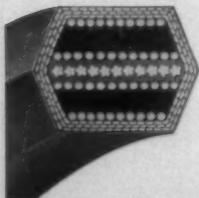
MILL REPORTS:

"WE'RE SAVING 25 M

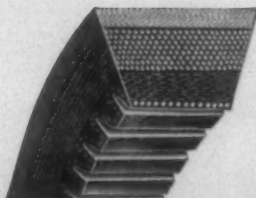


SELECT THE V-BELT YOU NEED FROM THE ONLY COMPLETE LINE IN THE INDUSTRY

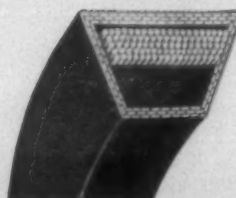
Dayton
Double Angle V-Belt



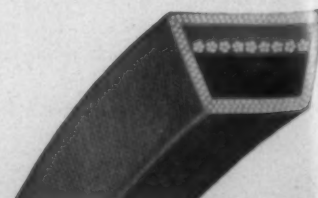
Dayton
Cog-Belt



Dayton
Thorobred V-Belt



Dayton Fractional
Horsepower V-Belt



MAN-HOURS PER WEEK

with Dayton Variable Speed Drive Assemblies"

"Dayton variable speed drives are one of the greatest things we've put in the spinning room!" says the Overseer of a major North Carolina spinning mill.

"In the past, it took us approximately 1 hour to change speed on each of our 88 spinning frames. And, if a pulley was off-size and we couldn't make the required speed, why, the whole process had to be repeated. Now we change speed on any of the spinning frames equipped with Dayton Variable Speed Cog-Belts* in 5 to 8 minutes. I'd estimate we're saving 25 man-hours a week in change-over time alone. And, we've gotten rid of our 4 groove sheaves and big

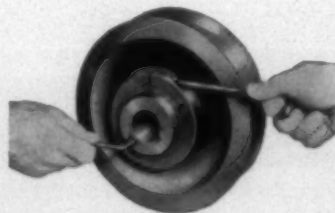
belt inventory — they're no longer necessary since we changed over to Dayton Variable Speed Cog-Belts.

"Worth more to us in dollars and cents is the fact that, with Dayton Variable Speed Drives, we can easily correct our speed to the last 'turn.' When conditions are right, we can just as easily increase our front roller speed to get the absolute maximum in production. As an example, say the speed of the front rollers was 150 rpm and the job was running good. In just a few minutes, with Dayton Variable Speed Drives, we can increase speed from 150 to 152 rpm and increase production 1-1/3%. That's where you can really make a profit!"

Dayton Variable Speed Cog-Belts assure high efficiency at all speeds



Dayton Variable Speed V-Belt Drives provide infinite speed settings within the sheave size range, occupy less space than a multiple V-drive of like horsepower capacity. This reduces bearing loads, eliminates belt matching. No sheave lubrication is needed. Write for Dayton's new variable speed drive catalog.



For the name of the selected Distributor carrying the complete Dayton Variable Speed Drive Assembly in your area, write The Dayton Rubber Company, Industrial Replacement Div., Dayton 1, Ohio.

Dayton Rubber

*T. M.

World's Largest Manufacturer of V-Belts

© D. R. 1957

able. A pan or vessel filled with liquid which is still will take much longer for measurement than a vessel with stirrers. Moving air in an oven will take longer to bring a thermometer stem up to temperature than a still liquid, but still air will take even longer than moving air to transfer its heat to the measuring element.

The use of very enlarged temperature-sensing surfaces will improve matters, as mentioned before. For air in rapid motion a very sensitive electrical or electronic instrument is advisable to follow temperature changes, and the temperature-sensitive portion should be correctly placed in the air stream.

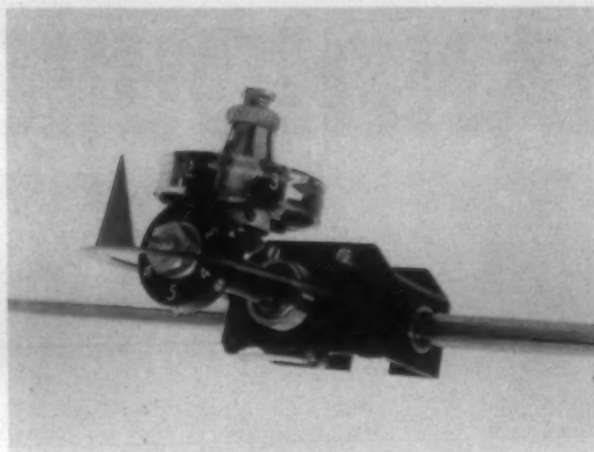
When measuring a liquid temperature it should be realized that so-called "stratification" can occur, i.e., layers of hotter liquid are on top of a large hot liquid storage vessel and colder layers accumulate on the lower section. The temperature-sensing element has to be located at a point of average temperature.

To install instruments where they are free from heat radiation, vibration, dust and dirt is an obvious precaution, which, however, is sometimes neglected. For example, a dial thermometer in a small boilerhouse should be fitted well away from the heat and vibration of the boiler feed pumps. In case of excessive dust, specification of a dust-proof housing is important. Similarly splashproof casings are advisable where moisture is present.

As a general rule all plant instruments should be installed in accessible well-lighted positions with their instrument scale at eye level. Large readable black on white figures make for easy reading. The capillary tubing of mechanical remote thermometers, or the wiring of low-temperature electrical resistance thermometers, or of high temperature thermocouple pyrometers should be well protected against mechanical damage. Owing to the fragility of some refractory sheaths for pyrometers, care should be taken to see that they will not be knocked when work is loaded into an oven.

Instrument Maintenance

The following statement is not intended to shake confidence in thermometers or pyrometers, but should emphasize the necessity of planning instrument maintenance. Does the instrument user really know his temperature measure-



Multi-point pen system, underside view.

ments are accurate? Does he check the performance of a thermometer or pyrometer frequently enough to find out? To take indications or records for granted without periodic check is wrong. Out of five instruments at least one may give wrong information if not periodically inspected and tested.

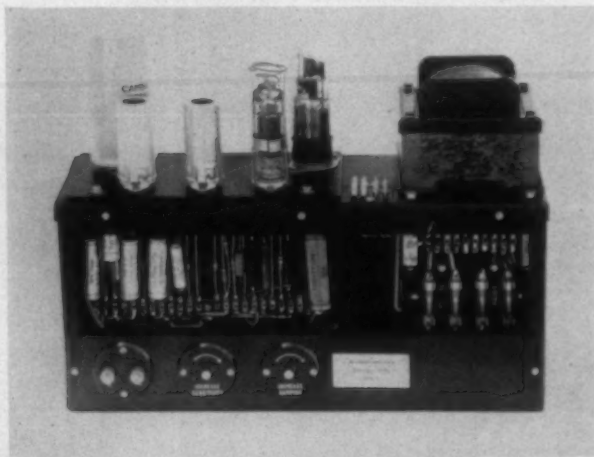
With the increased use of measuring industrial instruments and automatic controllers, it becomes necessary to devote more thought and action to proper maintenance. The most reliable instrument will fail if not properly serviced and checked at established intervals. The manufacturers usually supply installation and maintenance instructions with each instrument, and these often set out in great detail how servicing should be done.

It is a fact that the first part of the instructions is usually read but the second part, dealing with maintenance, is often by-passed as something to be studied should the need arise. This neglect to grasp information from the beginning might easily lead to trouble. Lack of specialized knowledge may lead to a certain reticence to handle delicate-looking instruments, causing one to regard a controller mechanism as a box of tricks, better left alone as long as possible. This attitude is wrong. By preparing a scheme for "planned maintenance" whereby each instrument in the plant is inspected, cleaned and tested at regular predetermined times, the proper maintenance can always be achieved with little trouble. Deterioration of a temperature instrument is usually slow; the sooner it is detected and put right, the easier maintenance becomes.

Regular inspection of instruments will sometimes detect why they have gone wrong. The cause may be alterations in working conditions. To find out in good time is usually more than repaid by the trouble it avoids. When an instrument breaks down the cause of the trouble must be located, otherwise a repetition might occur. It is good practice to look first for external causes before coming to the conclusion that the instrument itself is at fault. A brief inspection may reveal for example that a liquid-filled bulb has been overstrained or that a capillary tubing is broken. It is common knowledge that working conditions greatly influence performance and can cause mechanical thermometer parts to overstrain.

Preventive Maintenance For Dial Thermometers

Mechanical thermometers are pressure-operated instruments, the thermometer being, in fact, an instrument for



Chassis with electronic units.

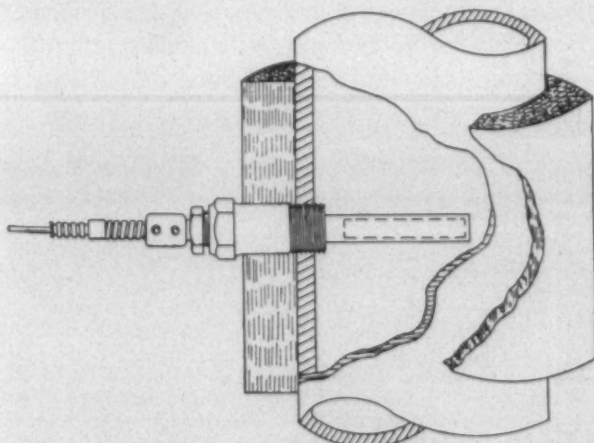
measuring the increase in pressure of the filling medium as its temperature rises. The filling can be mercury or other liquid, or a gas, but the instrument must remain completely sealed. The writer still remembers the early days of the introduction of dial thermometers in numbers into industry, when people tried to shorten an excessive length of a capillary tubing by simply cutting instead of coiling it.

Dirt, moisture, fumes, vibration and heat are detrimental for efficient operation. With some care a location can always be found for capillary instruments where they are clearly visible but nevertheless out of harm's way. They are best at eye level, but dial thermometers with right stems can also be set at a correct angle between stem and case so that the dial will be in line of vision.

Where possible sheaths or thermometer pockets should be used to enable easy withdrawal of the instrument without having to empty the vessel. Pockets should, however, be thin-walled in order to permit good heat transfer from the measured fluid and to reduce thermometer lag. Filling the space between stem and pocket with mineral oil or metal filings is advisable for mechanical thermometers or pyrometers. Dial thermometers in the open air must have tight cases and the same applies where splash from water or steam hosing occurs. Special covers are advisable over thermometer cases in some places where heat is excessive. Capillary tubings must be fastened with clips and not allowed to dangle. Tubing near the floor is best protected by covers against mechanical damage from moving trucks, etc.

Apart from good visibility, accessibility of an instrument is important as it stimulates servicing. Preventive maintenance for thermometers requires regular checking by means of a water or oil bath. The test thermometer must be accurate and the liquid agitated to insure even distribution of temperature. Minor adjustments on pointer fulcrums or levers can usually be done in the course of routine maintenance, but where a leak has developed in the thermometric system the only remedy is to return the instrument to the manufacturer for repair and recalibration. Thermometers not in use should be stored in a clean, dry and cool place. Capillary tubings should be carefully coiled at as big a diameter as possible. Casings should be stored wrapped in special paper and stems protected from moisture by a suitable grease coating.

A great number of instrument casualties are caused by



The correct way to install a thermometer bulb in an insulated pipe line is to expose as much bulb surface as possible to the element being measured.



Two new answers to your need for ... Better Chemical Resistant Coatings

Two Chemical Resistant Epoxy
Resin Plastic Coatings That:

- ✓ Withstand most severe acid and fume conditions.
- ✓ Are performance proved under actual operating conditions.
- ✓ Mean longer life and fewer coats.
- ✓ Have no application difficulties.

Gilpon

With catalyzing agent,
for severe exposures.

Gil-Chem

For less severe
exposures.

WRITE FOR FREE BULLETIN TO:
GILMAN PAINT & VARNISH COMPANY
CHATTANOOGA, TENNESSEE
OR
OLNEY PAINT COMPANY
Distributor For The Carolinas
SPARTANBURG, SOUTH CAROLINA

unskilled handling during adjustment or repair. The fact that most standard instruments have spring elements made from phosphor bronze, unless stated otherwise on the dial, lays them open to corrosion. The Bourdon elements themselves must be suitable for the job, and the latter must be clearly stated when ordering a new gauge for special duties. Where during maintenance slight signs of corrosion of inner working parts appear, close watch has to be made for progressive deterioration, and it is better to replace in good time by better suitable materials than to wait for a breakdown of a gauge.

Where during maintenance excessive heat is discovered so that the pyrometer cannot be touched by hand, the gauge must be located farther away from the source of heat. Metallic flexible tubings are available for this purpose. Summing up, where there exists any doubt about suitability, a reputable manufacturer should be consulted.

The fixing of a new instrument is often performed by the supplier. Maintenance, however, is the responsibility of the user, apart from special contract, and is often regarded as something to be dealt with in the distant future. This neglect may easily lead to trouble. The conscientious plant engineer should make a point of studying carefully all instructions during the presence of the service engineer or the fitter from the manufacturer so that any queries can be settled authoritatively.

Design Engineering Show At N. Y. Coliseum

Twenty thousand of the top engineers in industry, the men who design consumer products and the machines which turn them out, are expected to attend the second Design Engineering Show at the New York City Coliseum, Monday, May 20 through Thursday, May 23.

Approximately 375 companies, including many of the largest in the country, will exhibit component parts, materials, fasteners, finishes and coatings, shapes and forms, and accessories to product development. About 4,000 representatives of these exhibiting companies will be present to answer the engineers' questions.

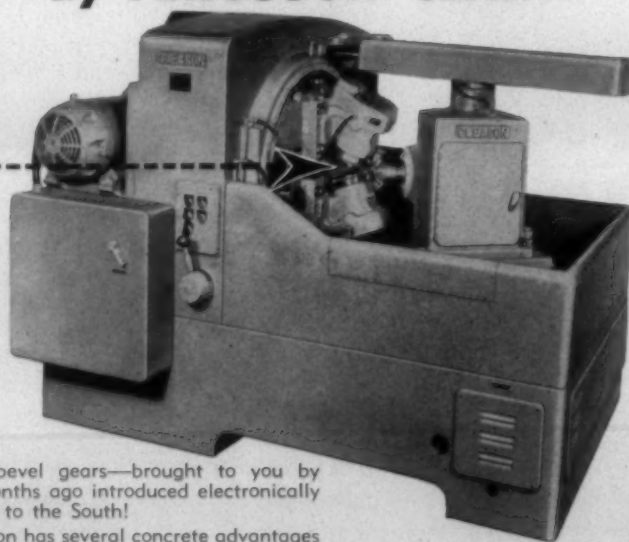
Concurrently with the show, the machine design division of the American Society of Mechanical Engineers will sponsor a three-day conference on design engineering problems, May 20-22. The conference will open with a panel discussion on "Procedures in Developing New Designs" and will have sessions on the mechanical, materials and electrical aspects of design engineering. William F. Ryan, A.S.M.E. president, will deliver the principal address at a banquet at the Hotel Sheraton Astor, May 23.

The show, which was held for the first time in Philadelphia last year, will be two and one-half times larger this year, and will have twice as many exhibiting companies. Advance registration cards and hotel information may be obtained from Clapp & Poliak Inc., 341 Madison Ave., New York 17, N. Y.

Another "FIRST" for you — by FERGUSON GEAR!!

Straight Bevel
"Coniflex"

Gear
Generators



Here is a giant stride in bevel gears—brought to you by Ferguson, who only a few months ago introduced electronically controlled heat-treated gears to the South!

Our new "Coniflex" installation has several concrete advantages for you:

1. Production of finer quality gears;
2. Saves time—and money—on orders of any size; thus
3. Speeds up production and delivery;
4. Provides complete gear service at one reliable source.



FERGUSON GEAR COMPANY
GASTONIA, NORTH CAROLINA • TEL. UN 4-2626

SALES OFFICES { GREENSBORO, N. C. B. T. CLADEN
GASTONIA, N. C. D. W. LYNCH TEL. 3-2462 DENVER, N. C.
GREENVILLE, S. C. HAROLD H. HARRISON TEL. 2-6190
LA GRANGE, GA. JOHN FERGUSON TEL. 5040, P. O. BOX 486

Send your next gear order to Ferguson for service that will surprise you . . . Save you time, trouble and money, too. Contact Ferguson's nearest Sales Engineer, or write, wire or phone for complete information and quotation, 511 Airline Avenue, Gastonia, N. C.

Member American Gear Manufacturers Association

PERSONAL NEWS

Proctor & Schwartz Inc. of Philadelphia, Pa., announces the retirement of three well known, long-service members of its sales organization. They are John H. Senior, Warren A. Dickinson Sr. and Thomas J. Wilson Sr. Mr. Senior is a veteran of over 51 years with Proctor and has held numerous positions from engineering to vice-president, a position he has held since 1945. He is well known for his lectures to textile schools and technical societies covering the handling of textile fibers and blends. With over 48 years of experience with Proctor behind him, Mr. Dickinson retires as sales manager for the textile and veneer industries. He has been at this post for 35 years. Mr. Wilson has been with Proctor for more than 39 years. Most of this time has been devoted as a sales engineer in Chicago. He covered the Midwest and Western territories and is particularly well



C. W. Schwartz William H. Poole

known by the mattress and batting manufacturers. Succeeding these men on the sales staff are C. W. Schwartz 4th as sales manager of textile machinery; William H. Poole as sales manager of the textile finishing equipment; and L. M. Christianson as sales engineer covering the Midwest territory out of the Proctor branch office in Glenview, Ill.

Larry E. Noel has joined the Mitin department of Geigy Dyestuffs, Division of Geigy Chemical Corp., Ardsley, N. Y., in a sales promotion capacity. He was formerly with Amerotron Corp. and Deering Milliken & Co. Inc.

Dr. Colin L. Browne, a textile development chemist, and Dr. James D. Alexander, a physicist, have joined the staff of Celanese Corp. of America's textile development laboratories at Charlotte, N. C. Both men are assigned to the applications and product development department staff. Dr. Browne received his Ph.D. at the University of Virginia and was formerly associated with Rohm & Haas Co., Philadelphia, Pa. He is a member of the American Chemical Society, A.A.T.C.C., and Sigma Xi. Prior to joining Celanese, Dr. Alexander was asso-

ciated with the Los Alamos Scientific Laboratory, Los Alamos, N. M., and the Naval Research Laboratory, Washington, D. C. A member of the Elisha Mitchell Scientific Society and Sigma Xi, Dr. Alexander received his Ph.D. at the University of North Carolina.

A. M. Fraser of USF Aspinook Finishing Division, Hartsville, S. C., has been named personnel director of Woodside Mills, Greenville, S. C. Mr. Fraser succeeds James Collier who has been promoted to industrial relations director of all Woodside Mills, with headquarters in Greenville.

Herman D. Ruhm Jr. has resigned as president and a director of Burlington Industries Inc., New York City, effective May 1. He has been president since Sept. 19, 1955. Prior to joining Burlington as president, Mr. Ruhm had been president of the Bates Manufacturing Co. of Lewiston, Me., for ten years. Prior to his becoming president of the company he headed the Bates bedspread department and in 1937 he formed Bates Fabrics Inc., New York City, which sold Bates products.

S. Hampton (Hamp) Coleman has been appointed technical service representative in western North Carolina for Oakite Products Inc. Mr. Coleman, who will make his headquarters in Asheville, is a native of Red Springs, N. C. A former professional baseball player, he was with the Brooklyn Dodgers until an injury last year ended his baseball career. Prior to moving up to the Dodgers he was with Montreal in the AAA International League. In his new position, he will offer the complete line of Oakite cleaning materials, methods and services.

Shearod H. Crumpler was elected a vice-president and L. K. Fitzgerald has been named assistant general manager of the J. P. Stevens & Co. Inc.'s Rosemary Mfg. Co., Roanoke Rapids, N. C. All other officers and directors of the mills, owned by J. P. Stevens, were re-elected. Mr. Fitzgerald was general superintendent of Dan River Mills, Danville, Va., and held a series of executive assignments with Burlington Mills Corp., New York City, before joining the Stevens organization. He will also serve the Roanoke Mills Co., Roanoke Rapids, a member of the Stevens group.

The promotion of Norbert Weinberg to assistant to the manager of textile research and development of Becco Chemical Division, Food Machinery and Chemical Corp., Buffalo, N. Y., has been announced by Dr.

H. O. Kauffmann, Becco's technical director. Mr. Weinberg was formerly a resident of Paris, France, and attended Sorbonne University. He was graduated from the Philadelphia Textile Institute in 1953 with a B. S. degree in chemistry and dyeing. He started with Becco in 1953 as a member of the textile research and development group.



Fred C. Butler

Fred C. Butler has been promoted to the position of director of manufacturing for Pneumafil Corp., Charlotte, N. C. Prior to joining Pneumafil in 1951, Mr. Butler served as production control superintendent with Allis-Chalmers Mfg. Co. in Milwaukee, Wis. He is a native of Honesdale, Pa., and a graduate of Lehigh University.

Charles R. Walters, vice-president of Abney Mills, Greenwood, S. C., has been named to the Greenwood Airport Commission in a concurrent recommendation by the Greenwood County Legislative Delegation and the Greenwood City Council.

Edward N. Leonard has been elected vice-president in charge of manufacturing at all plants of Lassiter Corp. The Charlotte, N. C., firm designs and manufactures a variety of textile packages.

Harold Ball, chief engineer of the Foster Machine Co., Westfield, Mass., has been re-elected chairman of the textile engineering division of the American Society of Mechanical Engineers. Jackson A. Moore has rejoined Foster Machine as project engineer. Mr. Moore returns to Foster after a period of some months with Allied Chemical & Dye Corp., New York City.

Barrington J. King, executive assistant with Callaway Mills, LaGrange, Ga., has retired. In the 40 years in which Mr. King has been associated with the company, he served as director of various plants and as head of the sales offices in St. Louis, Mo., and Richmond, Va. Born Dec. 6, 1883, in Roswell, Ga., Mr. King attended Georgia Military Academy in College Park and graduated in 1903. He then attended Cornell University in Ithaca, N. Y. His first position was with the Roswell Bank in his home town. In 1947, Mr. King became executive assistant to Fuller E. Callaway the founder of Callaway Mills. He has a

NEED MORE FILTER CAPACITY?

"HOLYOKE" PRESSURE and GRAVITY FILTERS

If your present water filtration plant is not producing the gallonage of clean, purified water you need, call in a "HOLYOKE" filter engineer.

Specify "HOLYOKE" WATER FILTERS for time-tested design, highest performance, efficient filtration, and economical operation.

Repair parts and service
for NORWOOD filters.

Correspondence Invited

Established 1863

HOLYOKE MACHINE COMPANY

CALENDER and EMBOSING ROLLS
for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

PERSONAL NEWS

son and a daughter and two grandsons. He is an elder in the First Presbyterian Church and served for a number of years as a member of the LaGrange Board of Education. His hobbies are horses and dogs and as a young man was a member of the Governor's Horse Guards of Atlanta, a famous cavalry troop in years past.

James A. Wright of Columbus (Ga.) Mfg. Co. has been named general manager of Strickland Cotton Mills, Remerton, Ga. R. B. Gunn has been named superintendent at Strickland.

Chemstrand Corp., New York City, has named Carl O. Hoyer to the post of vice-president, engineering, and Jack W. Mueller to the post of comptroller. Mr. Hoyer continues as director of engineering. Mr. Mueller was chief accountant for the company. Both men are natives of St. Louis, Mo.

John Wharton, research and development manager of Courtaulds (Ala.) Ltd., New York City, has been awarded an FTI (Fellow of the Textile Institute) by the Council of the Textile Institute in Great Britain. Mr. Wharton has been with Courtaulds since 1940 except for service during wartime with the British Ministry of Supply. He makes his headquarters at the plant in Le Moyne, Ala.

Ralph J. Gall has been promoted to assistant manager of organic research and development of the Becco Chemical Division, Food Machinery and Chemical Corp., Buffalo, N. Y. Mr. Gall received an M.S. degree in chemistry from Canisius College in 1947. He joined Becco in 1947 as a member of the research department and has held the position of group leader, organic research and development, since 1954.

J. L. Moore of Kings Mountain, N. C., has been named superintendent of the Poulton, Ga., plant of Tifton (Ga.) Cotton Mills. Wallace Gentry, formerly with the Dunson Division of Pepperell Mfg. Co., LaGrange, Ga., has been named overseer of carding at the plant.

Clarence E. Wylie of Mooresville, N. C., has formed Findye Chemical Co. to handle various dyeing and finishing chemicals. Mr. Wylie is also a representative of the Wilson Lewith Machinery Corp. of Charlotte. He also represents E. P. Alexander & Son, Clifton Heights, Pa., leather belting and loom leathers and transmission equipment; and Cronland Warp Roll Co. of Lincoln, N. C.

The American Viscose Corp., New York City, has announced organizational changes at its Marcus Hook, Pa., plant. Dr. Wayne A. Sisson becomes technical assistant to the vice-president in addition to his duties as leader of the cellulose section. Dr. John A. Howsmon, formerly leader of the physical chemistry section becomes manager of basic research. Joseph E. Ross, formerly leader of the tire yarn section, becomes manager of development. Dr. Everett W. Lothrop Jr., formerly head of the yarn

and fiber evaluation group, becomes manager of technical services. Dr. A. Ross Adams, formerly an assistant to the vice-president, becomes manager of the administrative office. Richard H. Braunlich, formerly leader of the viscose textile filament section, becomes leader of the viscose filament section which also includes the former tire yarn section. Nicholas J. Robinson has been appointed chief accountant for corporate departments and functions located at Marcus Hook. Edward J. Dunn has been appointed chief project chemist in the technical department.



Howard R. Walker

Howard R. Walker, formerly assistant technical director for the dyestuff division of Sandoz Inc., has joined the Dow Chemical Co., Midland, Mich. He will head up the dyeing and finishing group of the recently-formed textile fibers department. Mr. Walker, a member of the A.A.T.C.C., was chief chemist of quality control with Riegel Textile Corp. prior to his work with Sandoz. Mr. Walker has a B. S. degree in chemistry from Furman University and an M. S. degree in chemistry from the University of Michigan. . . . Other changes in Dow's textile fibers department announced recently include the promotion of Ferrell G. Kent to the position of supervisor of quality measurement, Robert C. Cottrell and Phillip A. Gruber to development supervisor posts, and Charles M. Alberto and Harry N. Woessner to assistant development supervisor positions.

Dr. Robert E. Brouillard has been named assistant manager of the pigment division and Emil A. Wich has been made manager of the pigment technical department of the dyestuff and chemical division of General Aniline & Film Corp., New York City.



Paul S. Horton

Paul S. Horton has been appointed sales engineer in North and South Carolina and Tennessee for the H. F. Livermore Corp., a native of Rock Hill, S. C. Mr. Horton has had considerable experience in the textile industry. He was associated with one of the large mills in South Carolina for a number of years, and more recently was with Pneumafil Corp. in Charlotte. He will make his headquarters in the new Livermore sales office in Greenville, S. C.

Wilbur H. Brumfield has been appointed to the position of assistant to the president of Solvay Process Division, Allied Chemical & Dye Corp., New York City. A native of Mississippi, Mr. Brumfield has been a Solvay employee since shortly after his graduation from Mississippi State College in 1934. Starting in the plant laboratory at Solvay's Baton Rouge, La., plant, he was transferred to the Syracuse, N. Y.,

plant in 1946. Appointed superintendent of special products manufacture in 1952, he became superintendent of electrolytic operations in 1954 and in 1955 was made assistant to the director of operations. In his new post, Mr. Brumfield will make his headquarters at Solvay's executive office in New York City.

Robert M. Fortune, vice-president in charge of special equipment and calender roll sales, has been named to the board of directors of the McKiernan-Terry Corp., Harrison, N. J. A graduate of the U. S. Naval Academy, Mr. Fortune has been with McKiernan-Terry since 1940. Other newly elected members of the board include Herbert G. Dillon and Frank W. Hamilton. Mr. Dillon is vice-president in charge of sales for the Mead-Morrison Division and Mr. Hamilton is works manager of the company's Dover, N. J., plant.

R. T. Hull has been named vice-president and general manager of Emery Industries (Canada) Ltd., a subsidiary of Emery Industries Inc., Cincinnati, Ohio. James W. Ritz has been promoted to the position of sales manager of the organic chemical sales department succeeding Mr. Hull.

Dr. Benjamin Phillips, a research chemist, has been appointed a collaborator for the Southern Utilization Research and Development Division of the Agricultural Research Service, U.S.D.A. The newly appointed collaborator is assistant director of research for the Carbide and Carbon Chemicals Co., New York City, and has been a research chemist with that organization since 1941. Dr. Phillips is a native of Galveston, Tex. He received his bachelor's degree from the University of the South and his Ph.D. in organic chemistry at Johns-Hopkins University.

Michael J. Koroskys has been named market research analyst with the Chemstrand Corp., New York City, according to an announcement by Edward T. Powers, director of market research and product development. Mr. Koroskys has been assistant professor in the wool section of the Division of Textile Manufacturing at Lowell Technological Institute. At the same time he has served as technical director of the General Spinning Corp., vice-president of the Pot Spinning Corp., a project engineer of the institute's research foundation on textile and allied projects and as a consulting engineer for textile mills in this country and abroad. Before joining Lowell Institute in 1950, Mr. Koroskys served in supervisory roles with the American Woolen Co. and Drycor Felt Co. He is a native of North Andover, Mass., and earned his B. S. and M. S. degrees at Lowell Tech where he majored in synthetics.

Wilson Chappell, section man in the spooler room of Erwin Mills Inc., Cooleemee, N. C., plant, has retired after 50 years of continuous employment. He was given a gift by fellow employees in brief ceremonies, honoring his many years of service with the company. Later in the year he will receive a gold watch from Erwin Mills at the annual 25-year club banquet. Mr. Chappell first started to work at the Cooleemee plant as a 17-year-old

These men know the profitable meaning of Davis & Furber "Coordinated Production"



This is "Coordinated Production" in practice — planned jointly with Draper Bros. and Davis & Furber — executed and carried through in *all phases* by D&F as *one* qualified, responsible source. Working closely with the customer, through their Technical Service and Counsel, here's how Davis & Furber can do the same for you.

The *FIRST* part of D&F's established plan to increase your mill production is an "in-the-mill" survey with recommendations by D&F service technicians. They know mill operation from nationwide experience . . . and they know best what D&F equipment can do.

The *SECOND* step toward "Coordinated Production" is the special adaptation, when necessary, of new equipment to your specific requirements by D&F design engineers, or the modernizing of existing equipment to meet present needs.

The *THIRD* point is the use of D&F trained erectors and technicians to install, adjust, and set up actual production runs on D&F equipment, with follow-up to assure peak performance and production.

Davis & Furber and Draper operators and management, working hand-in-hand, have fulfilled the promises of D&F "Coordinated Production" in this woolen mill. Its features have benefited others.

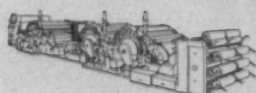
Check and see how they can benefit you.

Call Davis & Furber now for complete details, at either North Andover, Mass., or Charlotte, N. C.



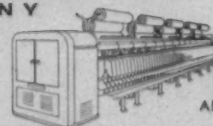
Helpful facts for mill managers, superintendents, overseers. Monthly D&F NEWS — copies on request.

DAVIS & FURBER MACHINE COMPANY



TEXTILE MACHINERY DESIGNERS
AND MANUFACTURERS

North Andover, Mass.
Charlotte, North Carolina



AD 11-6

CARDS • SPINNING FRAMES • PREPARATORY MACHINERY • WARP DRESSING MACHINERY • FINISHING MACHINERY
MACHINERY MODERNIZATION • ACCESSORIES, SUPPLIES, CARD & NAPPER CLOTHING, GARNET WIRE, TAPES & APRONS
SPARE PARTS • TECHNICAL SERVICE & CONSULTATION

PERSONAL NEWS

boy in 1907. He is a native of North Carolina, having been born in Yadkin County. He is married to the former Miss Ina Irene Canupp of Cooleemee and they have eight children, 15 grandchildren and two great-grandchildren.

Cephas P. Quattlebaum, former chief of planning of the South Carolina State Development Board, has become associated with the Southern division of Frank G. Binswanger Inc., Philadelphia, Pa., industrial realtors. Mr. Quattlebaum will enable Binswanger to offer both planning and engineering services to the textile industry in meeting plant needs. Mr. Quattlebaum is a native of Conway, S. C., and was graduated as a civil engineer from Clemson College in 1937.

Ridley Watts, executive vice-president of Spartan Mills, Spartanburg, S. C. has been elected president of the Lighthouse, the New York Association for the Blind. He succeeds Percival S. Howe Jr. president of the American Thread Co., New York City, who has held the office since 1951.

Randall Hagner has been appointed to the post of textile consultant to the aluminum yarns division of Reynolds Metals Co., Louisville, Ky. Mr. Hagner retired from the Virginia-Carolina Chemical Corp., Richmond, Va., after a career of 40 years in the textile industry. He started as an apprentice in a silk weaving mill and was plant manager when he joined the Air Force as a pilot in World War I. He

later worked for Tubize Rayon in Hopewell, Va., for 17 years and with Fiberglas for 12 years. He then joined Virginia-Carolina and worked for that firm for eight years.

Warner H. Tabor and George A. Rawcliffe have been elected assistant vice-president and treasurer, respectively, of the Dixon Corp. Mr. Tabor, who is Dixon's



Warner H. Tabor George A. Rawcliffe

chief engineer in charge of product development in the company's textile department, was also named a member of the board of directors. He has been with Dixon since 1950. Prior to that he was engaged in research and engineering with Whitin Machine Works, Whitinsville, Mass. . . . Mr. Rawcliffe has been the company's controller since 1955. Prior to that he had extensive experience in various accounting and managerial capacities for a number of prominent concerns. He is a director of the National Association of Cost Accountants.

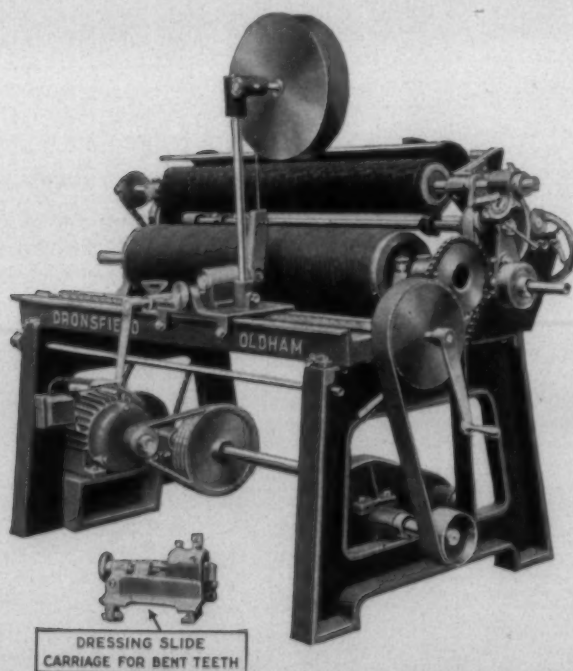
Leland L. Bogle has been appointed sales representative for the Fairbanks Co.'s South-

ern division, Rome, Ga. Mr. Bogle will cover the territory of Tennessee, Alabama and Northern Mississippi. He is a long-time resident of East Tennessee and attended McCallie School in Chattanooga and the University of Tennessee. He will make his headquarters in Birmingham, Ala.

Alexander N. McFarlane, vice-president and general sales manager of Corn Products Refining Co., has been elected president of Corn Products Sales Co., New York City. Mr. McFarlane, a graduate of Tufts University, joined the Corn Products technical service department in 1934. He served successively as a technical sales representative, associate director of research, manager of the chemical sales department and assistant to the general sales manager. In 1953 he was elected a vice-president of Corn Products Sales and in 1955 was made vice-president and general sales manager of the parent company. Mr. McFarlane succeeds William H. Gamble who is now senior vice-president of Corn Products Refining.

M. J. Martin has been elected executive vice-president of Penick & Ford Ltd. Inc., New York City. In addition to his duties as executive vice-president, Mr. Martin will continue to be responsible for the sales activities of the company's packaged grocery department. O. H. Tousey has been elected a vice-president of Penick & Ford and will move to the company's offices in New York City from Cedar Rapids, Ia. Mr. Tousey succeeds D. P. O'Connor in charge of bulk product sales. Mr. O'Connor becomes vice-president in charge of

LICKER-IN ROLLER GRINDING, DRESSING, RECOVERING & BURNISHING MACHINE No. 163.



for maintenance of taker-in rollers for grinding, dressing, recovering and burnishing.

Sole Agents for Dronsfield's Machinery:
John Hetherington & Sons, Inc.,
N. Marietta St. Ext., Gastonia, N. C.

DRONSFIELD BROTHERS LTD · OLDHAM · ENGLAND

public relations. H. A. Horan becomes sales administrative consultant in the Cedar Rapids office and was formerly manager of the Eastern bulk sales department for Penick & Ford. W. S. Russell has been made manager of the Eastern bulk sales department. L. S. Poer succeeds Mr. Tousey as Western bulk sales manager.

John G. Frischkorn has been appointed assistant sales manager of the Cleveland Tramrail Division of The Cleveland Crane & Engineering Co., Wickliffe, Ohio. Mr. Frischkorn has had 16 years' experience with Cleveland Tramrail as design engineer for overhead materials handling equipment. For the past year he has been district sales manager covering West Virginia, Pennsylvania, New York and Eastern Canada. Mr. Frischkorn was with Euclid Crane & Hoist Co. for five years where he served in engineering and sales capacities including sales manager.



David E. Henderson

David E. Henderson has been elected a vice-president of Roberts Co., Sanford, N. C., manufacturer of spinning frames. In his new post Mr. Henderson will primarily be concerned with company management. He was formerly vice-president of the Southern division of Bruce Payne & Associates Inc. of Westport, Conn., management consulting engineers. Prior to that he was head of the industrial engineering department at North Carolina State College in Raleigh. He is a graduate of the University of North Carolina with a B.S. degree in mechanical engineering, and he also holds a master's degree from New York University.

George W. Felker III has been appointed vice-president of Riegel Textile Corp., Trion, Ga. Mr. Felker will be in charge of operation planning. A graduate of Georgia Tech, he was formerly vice-president of Avondale Mills Inc., and was with Dan River Mills Inc., prior to that association.

J. Morton Curran Jr., president of Morton Curran & Co., New York City, has been elected president of William L. Barrel Co. succeeding Ben T. Comer who will continue as treasurer. J. Somers Ritchie Jr. vice-president of Morton Curran and the entire Curran staff have joined the Barrel Co. in capacities equivalent to those held before. The Barrel organization has become selling agents for Summerville Mfg. Co., Summerville, Ga. Mr. Curran is owner of Summerville Mfg. as well as being president and treasurer. Mr. Comer is president of Comer Machinery Co., Atlanta, Ga.

Phillip Bergh has been appointed advertising and sales promotion manager of the textile division of U. S. Rubber Co., New York City. Mr. Bergh will direct advertising and sales promotion on Asbeston, Lastex, Trilok, Uspun yarns and all other products of the textile division. Mr. Bergh joined U. S. Rubber in 1934 to aid in the development of markets for Lastex. After



In ancient Egypt, the religious belief that the body must be preserved intact after death to achieve eternal bliss led to the construction of massive tombs durable enough to protect the dead against evil spirits or marauders through ages of oblivion. The most famous of these, the three Great Pyramids of Gizeh, each covering approximately 13 acres and towering nearly 480 feet, remain today as indestructible symbols of the marvelous engineering skill and sheer perseverance of the Egyptians who built them forty centuries ago.

When it comes to longer-lasting protection for your thread guide, WALHARD Hard Chromium Plating is your answer. Outstanding workmanship and 20 years' experience exclusively on Hard Chromium back the WALHARD signature, guaranteeing you substantial savings in maintenance and down-time costs. Don't be satisfied with less than the best — specify WALHARD on your next Hard Chromium Plating order for polished or satin finished guides.

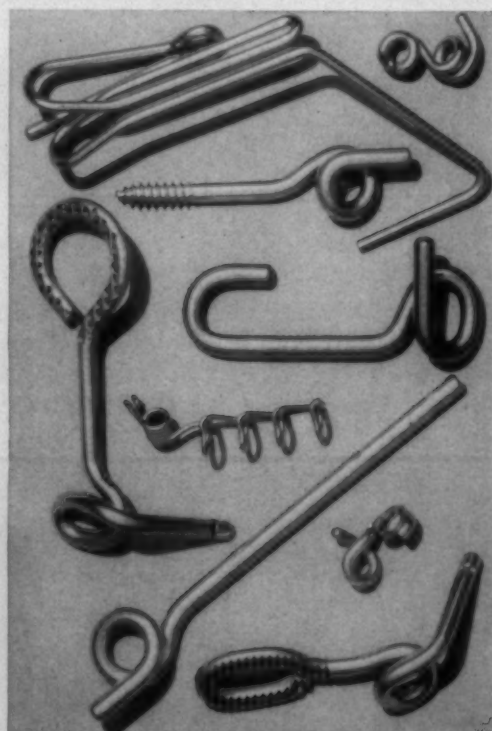
Be sure you are getting quality — it costs no more and lasts longer.



The leading name in textile hard chromium plating

WALTON and LONSBURY

77 NORTH AVENUE — ATTLEBORO, MASSACHUSETTS



PERSONAL NEWS

several years in sales promotion he became assistant sales manager and then merchandise manager of Lastex. In addition to his duties as merchandise manager, he has been in charge of advertising and sales promotion on Lastex.

Guy C. Quick Jr. has been named field superintendent for the construction of Chemstrand Ltd.'s new Acrilan acrylic fiber plant now going up in Coleraine, Northern Ireland. The Irish firm is a subsidiary of the Chemstrand Corp., Decatur, Ala. A 1943 engineering graduate of the University of Pennsylvania, Mr. Quick has been with Chemstrand since 1951. He was formerly with American Viscose Corp.

Roger R. Reynolds has been appointed district sales manager for the Texas, Oklahoma and Louisiana territory for the Yale Materials Handling Division. The Yale & Towne Mfg. Co., Philadelphia, Pa. L. Patrick McGauley will be the sales representative in charge of a new sales office which has been opened by the company in New Orleans. Mr. Reynolds has been associated with Yale hoist sales since 1947.

Three promotions have been announced by Diamond Crystal Salt Co., St. Clair, Mich. and Akron, Ohio. Robert B. Ball has been made a director of the company and vice-president in charge of manufacturing and engineering; Edward M. Dodd has

been named assistant to the president; and Russell D. Rudolph has been named vice-president of the company. Mr. Ball started as a chemist with Diamond Crystal in 1929. Mr. Ball was serving as vice-president and St. Clair plant manager before his promotion. Both Mr. Dodd and Mr. Rudolph were executives of Jefferson Island Salt Co. which was recently acquired by Diamond Crystal.



E. T. McIlwain

E. T. McIlwain has been appointed Sun-tone service manager and sales representative for the Warwick Chemical Division of Sun Chemical Corp. In his new post he will be responsible for technical service on Suntone pigment printing colors in Warwick's Southern territory and serve as sales representative in the South Carolina area. He will make his headquarters at Warwick's Southern plant in Rock Hill, S. C. A 1947 graduate of Clemson College, he was formerly with Fulton Bag & Cotton Mills and Interchemical Corp.

Walter Regnery, vice-president and general manager of Joanna Cotton Mills Co., Joanna, S. C., has been elected president and chairman of the board of trustees of the Textile Research Institute, Princeton, N. J. Officers, in addition to Mr. Regnery, who have been elected are: vice-president

and chairman of the executive committee, William E. Clark, vice-president and general manager, Textile Division, U. S. Rubber Co., New York City; treasurer, Dr. Bruce B. Allen, technical director, textile division, Celanese Corp. of America, Charlotte, N. C.; and secretary and assistant treasurer, Paul C. Alford Jr., Textile Research Institute.

Jesse R. Tarrer has been appointed shift overseer in the No. 1 weave department of Thomaston Mills, Thomaston, Ga. Mr. Tarrer was promoted from loomfixer.

Walter S. Montgomery, president of the Spartan Mills, Spartanburg, S. C., has been elected a director of the Spartanburg Chamber of Commerce for 1957-1958. Mr. Montgomery has also been named general chairman of the fund-raising campaign for Converse College of Spartanburg.

Dr. Thomas Lesslie has been named chief research chemist of the Southern Dyestuff Corp., Charlotte, N. C. He will concentrate on new products for the textile industry. Dr. Lesslie came to Sodyeco in 1956 from Monsanto Chemical Co. where he had been a research chemist and group leader.

Carl H. Swan, president of Craftspun Yarns Inc., Kings Mountain, N. C., has been elected president of the newly-formed Chamber of Commerce at Kings Mountain.

Frank Stewart, second hand in Milstead twisting, has been promoted to assistant overseer of weaving and twisting in the

Again Available
to the
TEXTILE INDUSTRY

REPAIR PARTS

Repair and replacement parts, precision built specifically to fit your ALLEN equipment, are now available or can be specially made for prompt delivery.

★ ★ ★ ★ ★

FAMOUS
ALLEN

**Kiers, Top Dyeing Machines
Special Bleaching Equipment**

Textile mills now using, or seeking to purchase Allen Dyeing and Bleaching Equipment will welcome the announcement that all Allen products are now being manufactured by O. G. Kelley and Company of Boston, Mass., with William Allen Son's Company, the former owners, acting as engineering consultants and sales representatives.

With its tremendous facilities and long experience in the metal fabricating field, O. G. Kelley and Company, working closely with ALLEN engineers according to ALLEN drawings and specifications, is well equipped to supply you with the finest in bleaching and dyeing equipment.

WILLIAM ALLEN SON'S COMPANY
SHREWSBURY, MASSACHUSETTS

Division of **O. G. KELLEY & COMPANY**
BOSTON 22, MASSACHUSETTS

★ ★ ★ ★ ★

Milstead, Ga., plant of Callaway Mills, La-Grange, Ga. Mr. Stewart is a native of Milstead and worked in the payroll department for several years after finishing school at Oglethorpe University. He has been working in the twisting department since 1949.

Samuel B. McFarlane has been appointed manager of the fiber research department of Celanese Corp. of America's Summit, N. J., research laboratories. For the past year, he has served as laboratory manager of the research facilities in Summit. Dr. Michael J. Curry succeeds Mr. McFarlane as laboratory manager and Bruce S. Ainsworth replaces Dr. Curry as manager of the chemical applications laboratories.

J. W. Jelks has been appointed director of industrial relations for all divisions of the J. P. Stevens & Co. Inc., New York City. Mr. Jelks, who for the past six years has been personnel director of the Ware Shoals Division, Riegel Textile Corp., will make his headquarters in Greenville, S. C. A graduate of Wake Forest College, Mr. Jelks became recreational director for the Winnsboro Mills of the U. S. Rubber Co. in 1939. In 1941 he became employment manager and was promoted to the position of industrial relations manager the following year. He remained with Winnsboro Mills for 12 years before joining Riegel.

Joe D. Cantrell has been appointed to

the newly created post of assistant to the director of safety and plant protection, Celanese Corp. of America. Mr. Cantrell was formerly supervisor of safety and plant protection of the company's chemical operation in Pampa, Tex. He will perform his new duties from the Celanese office in Charlotte, N. C.

E. G. Riely, general manager of Pilot Mills Co., Raleigh, N. C., has been elected a director at the annual meeting of the company.

OBITUARIES

F. E. Banfield Jr., 71, former vice-president and director of Whitin Machine Works, Whitinville, Mass., died recently in Durham, N. C. Mr. Banfield joined Whitin Machine in 1933 and rose from works manager to vice-president in charge of engineering. He is survived by his widow, a daughter and a son.

S. Jervey DuPre Sr., 82, pioneer Spartanburg, S. C. textile manufacturing executive, died recently. Mr. DuPre was in various executive capacities with D. E. Converse Co. Mills, Spartanburg, for 50 years. He retired several years ago as president of Glendale Mills. Mr. DuPre is survived by his widow, three sons, three daughters and a sister.

Joseph Flanagan, 84, died recently. He was founder and president of the old Keystone Winding & Twisting Co., Philadelphia, Pa. He headed the firm until its dissolution in 1937 after which he served as a consultant on linen, rayon, cotton and silk threads. He is survived by three sons and a daughter.

Willfred W. Lufkin Jr., 54, died recently in New York City. Mr. Lufkin was vice-president of Celanese Corp. of America. Before joining Celanese in 1955, Mr. Lufkin had served as president of Wellington Sears Co., New York City. He joined Wellington Sears in 1950. During more than 30 years in the textile field, Mr. Lufkin had been associated with Ipswich Mills Inc., Spool Cotton Co., and Dan River Mills Inc., where he served as vice-president, general sales manager, and a director as well as president of G. A. Stafford Co., an export subsidiary. A 1925 graduate of the University of New Hampshire, Mr. Lufkin took post-graduate work at Lowell Textile Institute. He is survived by his widow, four daughters and a son.

Joseph Mullen, former director of Olin Mathieson Chemical Co., St. Louis, Mo., died recently. He was president of Southern Acid & Chemical Co., St. Louis, which merged with Olin Mathieson in 1949. He is survived by a son, two daughters and a brother.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

RAEFORD, N. C.—Contract has been let for the construction of two warehouses as additions to the Raeford Worsted Corp. division of Pacific Mills here. The warehouses will be of masonry, steel and concrete construction. One will have 18,000 square feet of floor space, the other 13,000 square feet.

SPRAY, N. C.—Harold W. Whitcomb, president of Fieldcrest Mills, has announced that the Fieldcrest synthetic fabrics mill at Spray would be closed upon completion of work now in progress. The mill has employed 350 people and they will be transferred to other Fieldcrest plants as soon as conditions permit. Fieldcrest policy gives priority to the placement of such employees. The company announced that the mill had lost money for five consecutive years with the total loss running into a very substantial figure.

GASTONIA, N. C.—After several months on the market as a going concern, Spencer Mountain Mills Inc., is going to be stripped of machinery which will be offered piecemeal at private sale. The plant formerly produced sales yarns, tablecloths and napkins.

GASTONIA, N. C.—The Dixon Mill has been sold to the textile division of U. S. Rubber Co. by American & Efrid Mills, Mount Holly, N. C., according to spokesmen of both companies. The acquisition of this property makes the third plant own-

ed by U. S. Rubber in Gastonia. The Dixon plant has been idle about six months and stripped of its machinery. The 66,000-square-foot plant was purchased after a review of the company's ten year operation in the Gastonia area and is expected to be used for further expansion. Modifications to the building and property would be made and operations would be started on a modest scale as soon as possible.

DANVILLE, VA.—Dan River Mills Inc. plans capital expenditures of about \$5 million in 1957. This figure is up from \$4.5 million in 1956 according to the annual report of the firm. Most of the expenditure will go for new equipment including purchase of new spinning frames and new and wider looms.

LOWELL, MASS.—An announcement that the weaving and finishing mill of the Massachusetts Mohair Plush Co. Inc. has been purchased by Joan Plush Mills and Joan Fabrics Corp. has been made jointly by officials of both companies. Massachusetts Mohair has transferred 100 looms from Lowell and Salmon Falls, Mass., to its Southern division at Kings Mountain, N. C. where its furniture, drapery and upholstery operation is located. Massachusetts Mohair will continue to operate its 12,000 spindle Bradford yarn division at Lowell.

ABERDEEN, N. C.—A. & M. Karagheusian Inc. has purchased the rayon plant here which was formerly operated by The

Amerotron Corp. It is said that Karagheusian will move its carpet weaving department and part of its yarn operations here from two New Jersey plants. The move will take approximately a year to complete but the plant is to be reopened soon on a partial basis. The operation will keep expanding during the year until work is provided for possibly the same number of employees who were on the Amerotron payroll which was about 500. The shift is being made to meet greatly increased consumer demand, according to Karagheusian, and the two plants in New Jersey will remain in operation. The Aberdeen plant contains about 240,000 square feet of floor area and is situated on a 140-acre tract of land.

SCOTTSVILLE, VA.—One million dollars will be spent to expand production facilities for nylon tire fabric at the U. S. Rubber Co. plant here. The plant is being built to meet increased customer demand for this product. The current production of the plant is both high tenacity rayon tire cord and nylon tire fabric.

COLUMBUS, GA.—The Bibb Mfg. Co. is changing 464 deliveries of drawing to Ideal Feathertouch. The plant already has 56 deliveries of this type drawing installed.

LANCASTER, S. C.—Cost of physical expansion recently completed or currently under way at plants of Springs Cotton Mills totals in excess of \$9 million. It was re-

MILL NEWS

vealed earlier that plans for enlargement of the Eureka Plant at Chester, S. C., would cost in excess of \$2 million. Additions to the Lancaster plant will cost more than \$4 million and the Fort Mill plant has been enlarged at a cost of more than \$2 million. More than \$1 million has been spent on recent additions to the Kershaw plant.

GADSDEN, ALA.—C. L. Manderson Enterprises Co. has purchased four old cotton mills in Mississippi from the New South Textile Mills, a subsidiary of Joe L. Moore Co., real estate brokers. The purchase price was in excess of a half million dollars. The plants involved are located at Magnolia, Winona, Kosciusko and West Point, Miss. The plants are all part of the old J. W. Sanders organization and have been shut down for several years. It was stated that the machinery and equipment would be sold and the buildings would be utilized for rental and other purposes.

MONTGOMERY, ALA. — Manufacturing and administrative headquarters for the Alabama Mills Division of Dan River Mills Inc., has been shifted from Birmingham, Ala., to Montgomery.

WALLACE, S. C.—A tornado inflicted damage, described as not extensive, to the Delta Finishing Co. of the J. P. Stevens organization here. One end of the main build-

ing exploded during the tornado. There was little machinery damage but cloth that was in process at the time the electric power failed was damaged. The plant resumed operations after a 20-hour shut-down.

BENNETTSVILLE, S. C.—Construction is under way on Oak River Mills' new plant for Mohasco Industries Inc. The one-story, 150,000-square-foot building is expected to be ready for occupancy this Spring. The mill is intended for the manufacture of synthetic and blended yarns and will employ some 250 persons. The construction is being handled by Daniel Construction Co. Inc., Greenville, S. C.

DURHAM, N. C.—In recognition of having worked a record number of man-hours without a lost-time accident, 200 employees of the Durham Division, Mill No. 6 of Erwin Mills Inc., have received as safety awards individual magnetic money clips. The date of the last lost-time accident in the No. 6 Mill was Feb. 3, 1954, more than three years ago.

BLACKSBURG, S. C.—The new plant here of the Dodgeville Finishing Co., Attleboro, Mass., will open in June after installation of new equipment. Containing approximately 60,000 square feet of manufacturing space and 25,000 square feet of warehousing space, the plant will handle finishing of nylon, rayon and Dacron marquisettes for the curtain trade. The capacity of the plant will ultimately reach 1,000,000 yards

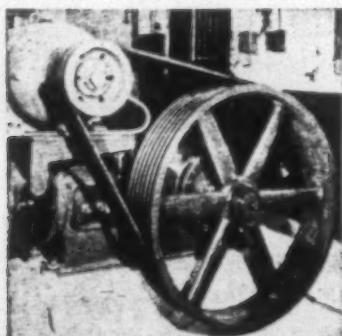
per week. Initially the Blacksburg plant will employ 50 to 80 persons and will probably increase to about 150 as equipment additions are made and production mounts.

HICKORY, N. C.—An annual four-year textile scholarship program at North Carolina State College will be set up, beginning with the 1957-1958 school year, by Shuford Mills Inc. The scholarship will pay \$500 annually to each recipient for the four-year course plus a minimum of \$500 for ten weeks of Summer work in one of the Shuford plants. Applicants are limited to residents of the general Hickory area and final selection will be made by the college's School of Textiles.

MILLEDGEVILLE, GA.—The J. P. Stevens & Co. Inc., Milledgeville Mills plant has begun operation on a limited scale. Production should increase in the new plant until about the middle of the year when it is expected to produce about 80,000 yards of cloth per week.

WEST POINT, GA.—West Point Mfg. Co. has approved \$4 million for modernization of its mills during 1957. This is the largest single allocation in the company's history and is the third phase of its current modernization program. Improved drawing frames are being installed and big package spinning is replacing small package frames. New blowers are being installed to reduce manual cleaning. Old quills are being replaced.

in every case...stepped-up drive efficiency ...less maintenance



COMPRESSOR DRIVE—"Long service, less downtime"...

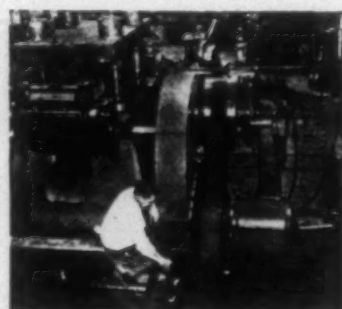


TEXTILE DRIVE—"Maintenance, take-up practically eliminated"...

Matchability of WOOD's "Sure-Grip" V-Belts and Sheaves assures a balanced drive performance. When the "tailored to the groove" V-belts seat themselves in the smooth, uniform sheave grooves they give higher operating efficiency, smoothness at all belt speeds, greater load capacity, ability to absorb shock and pulsating loads, minimum maintenance and lowest power consumption.

Whether your power transmission problems involve design, installation, maintenance or availability, don't hesitate to call in your WOOD's Industrial Distributor... he's a good man to have around because he has been successfully solving just such problems for years, on many different applications... he'll offer efficient, economical, practical ideas... give you the best in power transmission equipment, expertly designed and manufactured for your particular requirements.

Write us for Bulletin #199... and/or the name of your nearest WOOD's Distributor.



AUTOMATIC PRESS DRIVE—"Maintenance-free performance"...



T.B. WOOD'S SONS CO.

CHAMBERSBURG, PA.

CAMBRIDGE, MASS. • NEWARK, N. J. • DALLAS, TEXAS • CLEVELAND, O.

T.Q.C.A. Holds Annual Spring Meeting

The Textile Quality Control Association held its annual Spring meeting March 28-29 at the Clemson House, Clemson, S. C., and discussion during the two-day technical sessions ranged from opening and picking to trouble shooting in spinning mills.

The first technical session was held Thursday afternoon, March 28, presided over by Worth Kirkman of Pilot Mills Co., Raleigh, N. C. In the lead-off paper, Woodbury K. Dana of Saco-Lowell Shops, discussed the problem of evaluating opening and picking. It was pointed out that electronic testing devices have gone far in solving the evaluating problem of the processes from carding to spinning, but that such equipment has been of little value, so far, to the opening room. The program here concerns the large quantity of material processed, which makes difficult any constant evaluation. Mr. Dana proposed as a solution the checking of one hour's run instead of trying to select representative samples from the droppings after a day's run. To complete the evaluation, the results must be followed up all the way to the yarn, he pointed out.

In a paper entitled "Modern Opening and Cleaning Practice," Larry Orr of Whitin Machine Works presented the results of extensive mill tests on new Whitin opening machinery. Considerable attention was given to past practices in the opening room with emphasis on the fallacies of the system. The data presented indicates that the new Axi-Feed and Axi-Flo equipment gives reduced nep counts and greater trash removal than did the former systems in the mills reporting under the tests.

Ralph M. Rusca of the Southern Regional Research Laboratory outlined a number of improvements that have been made in cleaning equipment in a paper entitled "Improved Cleaning Equipment."

Discussing "Effects of Modern Cotton Harvesting and Ginning Methods on Quality Control," A. P. Aldrich Jr. of Aldrich Machine Works pointed out that much of the precleaning done at the gin merely grinds up the trash and distributes it through the cotton, thus making the cotton only appear to be cleaner.

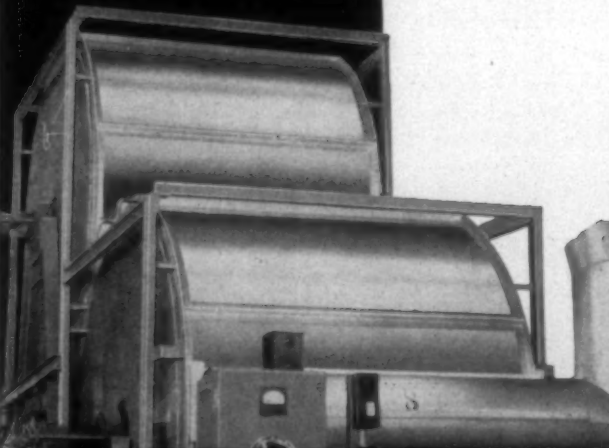
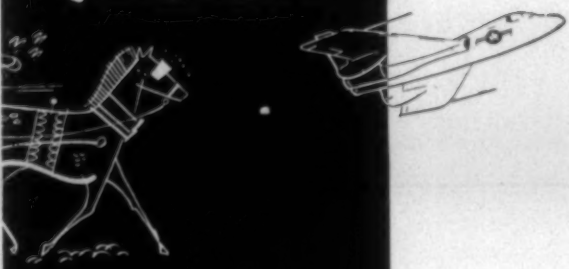
Second Technical Session

The second technical session was held Friday morning, March 29. Roger Jackle of North Carolina State College acted as chairman. The first paper was presented by John F. Bogdan of the School of Textiles at N. C. State College, who spoke on "Fiber's Contribution to Yarn Strength." Professor Bogdan discussed parameters for relating fiber-yarn strength, illustrating his remarks with slides showing relationships of twist multipliers, cohesion of fibers and related factors. A set of tables was given for predicting the strength of any yarn spun from a given blend if the yarn number, twist multiplier and the skein break of any other yarn from blend is known.

In a report on "Mill Experience in Full-Scale Change-over to Metallic Card Clothing," Joseph L. Delany of Joanna (S. C.) Cotton Mills Co. discussed the method and results obtained with the use of metallic card clothing at Joanna Mills. The paper concluded with a list of questions and answers concerning problems that arose and results that were obtained at Joanna during the changeover process.

A report on "The Quality of the 1956 Cotton Crop" was given by William H. Fortenberry of the U. S. De-

Faster...



Sims

SHIRLEY HOODS

will pay for themselves

There's no reason to use horse-and-buggy hoods when the jet age Sims Shirley Hoods are available. Here are hoods which conserve heat for drying slasher warps instead of dissipating it in the room.

The result is a 10 percent to 20 percent increase in production . . . which is why we say Sims Shirley Hoods will pay for themselves.

Made of stainless steel for long life . . . self-cleaning inside . . . equipped with our patented drip buckets that prevent condensate from dripping on cylinder and warp.

Shirley Hoods in the slasher room eliminate condensation on the ceiling in winter and keep temperatures down in summer.

for ECONOMY and QUALITY

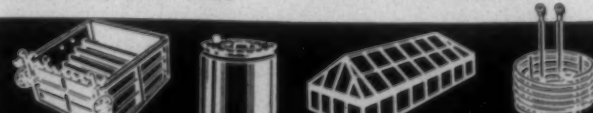
Our modern and progressive metal-working shops, our skilled craftsmen, our know-how—these are guarantees of quality.

For custom tailoring of stainless steel, coil, wire or write now.



Fabricators Since 1928

WEST POINT, GA.



partment of Agriculture. Mr. Fortenberry showed a number of slides giving the characteristics of the cotton crop compared with crops of prior years.

The final paper of the session was given by W. A. Thomason Jr. of Thomason Textile Service. Discussing "Trouble Shooting in Spinning Mills," Mr. Thomason illustrated his remarks with a number of slides showing how various troubles can be traced to their source with a combination of testing and measuring equipment and good logical reasoning.

Election of Officers

The meeting was concluded with the election of officers for the coming year. Named president to succeed Ashley Roberts of China Grove (N. C.) Cotton Mills Co. was Kelley Waits of Joanna Mills. Other officers named include Ray Gordon, The Kendall Co., vice-president; Bob Kiraldi, National Cotton Council, secretary; and Elvin Bond, U. S. Rubber Co., treasurer.

Named to the board of directors for three years were Paul Morgan, P. H. Hanes Knitting Co., Winston-Salem, N. C.; Emmett Bringle, National Cotton Council, Washington, D. C.; and Ashley B. Roberts, China Grove Cotton Mills. Named to two-years terms were Roger Jackle, N. C. State College; William H. Esslinger, Orr Mills, Anderson, S. C.; and W. A. Thomason, Thomason Textile Service. Elected for one-year terms were Dent Mangum, N. C. State College; Eric Weyl, textile consultant; and Sam King, Limestone Mfg. Co., Gaffney, S. C.

Alabama Cotton Manufacturers Meet

The Alabama Cotton Manufacturers Association held its annual convention April 10-12 at the Buena Vista Hotel in Biloxi, Miss. One of the highlights of the meeting was the election of Frederick M. Lyon, president of Opp-Micolas Cotton Mills, Opp, Ala., as president of the association for the coming year. Mr. Lyon succeeds R. C. Moyer, manager of The Linen Thread Co., Blue Mountain, Ala.

Other officers elected included E. R. Lehman, vice-president of West Point Mfg. Co., Langdale, Ala., who was named first vice-president to succeed Mr. Lyon. Dwight M. Wilhelm was re-elected executive vice-president; Mrs. Sara Davenport was re-elected secretary; and Joel E. Johnson, vice-president of Geneva (Ala.) Cotton Mills was named treasurer.

Named to the association's board of directors were O. K. Nivens, Avondale Mills, Sylacauga, Ala.; Frank Pate, Wehadkee Yarn Mills, West Point, Ga.; and C. P. Eldred, Bemis Bro. Bag Co., Talladega, Ala.

In his retiring address, Mr. Moyer, out-going president, expressed optimism for the future of textiles despite mounting imports, low profits and lean orders. He pointed out that textiles have the reputation of operating on small margins, seeking large volume for over-all profits. Mr. Moyer based his optimism on the following premises: (1) common understanding of the problems now confronted by the mills; (2) recent arrangements limiting Japanese imports to the U. S.; and (3) superior know-how and ability of American management and labor. He said that the American textile industry is going to do everything possible to make the Japanese quota plan work. While the system is far from perfect, he said, it nevertheless seems to be workable. Mr. Moyer added that while the industry is

already doing considerable research, it must devote even more money and time to developing new fabrics and processes. He said he hoped the industry would increase efforts toward encouraging more outstanding young men and women to select textiles for careers.

Committee Reports

A proposal that Alabama textile mills put their names on their buildings in large distinguishing signs received the hearty support of the A.C.M.A. public relations committee. Reporting for the committee, J. W. Patterson, Talladega Mills, Talladega, not only endorsed the proposal but added that part of the sign should be something like, "Textiles Provide 46,000 Goods Jobs in Alabama."

The report of the cotton improvement contest committee was given by O. K. Nivens, Avondale Mills. Oliver Smyth, Pepperell Mfg. Co., Pepperell, reported on the meetings during the past year of the Alabama Textile Operating Executives. Mr. Smyth reported that the A.T.O.E. met twice during the past year and both times drew overflow crowds and high interest.

Textile Education Foundation

Active interest in textile education was urged by D. H. (Hamp) Morris III, Geneva Cotton Mills, Geneva, in speaking before the convention. Mr. Morris is the new president of the Alabama Textile Education Foundation, succeeding M. Earl Heard, West Point (Ga.) Mfg. Co. Mr. Morris stressed the industry's need for more technically trained men. If we are to survive as an American industry, he said, we will have to develop more trained leaders for that purpose. He pledged the foundation's aid and encouragement in the work being done at the textile school of the Alabama Polytechnic Institute in Auburn.

Other officers of the foundation who have been elected are: Gene Gwaltney, Russell Mfg. Co., Alexander City, Ala., vice-president; Dwight Wilhelm, secretary; and T. Holmes Floyd, Opelika Textile Mills, Opelika, treasurer.

New trustees elected include Alexander Turner, Avondale Mills, Sylacauga; Fred F. Phillips, Buck Creek Cotton Mills, Siluria; T. P. Roberts, Adelaide Mills, Anniston; Sidney Tingen, West Boylston Mfg. Co., Montgomery; W. E. Dunn, Huntsville Mfg. Co., Huntsville; Charles Moody, Cone Mills, Alabama City; and M. Earl Heard, West Point (Ga.) Mfg. Co.

Proposed Name Change

The convention also heard a proposal that the name of the group be changed to Alabama Textile Manufacturers Association due to the expanding use of synthetics in the manufacture of textiles.

Delegates went on record as supporting efforts to obtain amendments that would make the Anti-Dumping Act of 1921 more effective. They pointed out that the present law is not effective in preventing the dumping of foreign merchandise in the U. S.

The convention also went on record as supporting the right of any man to make up his own mind, free from duress of compulsion, as to whether or not he wanted to belong to a labor union. The legislature of the state of Alabama was petitioned to retain and protect in full every feature and provision of the Alabama right-to-work law which has been in effect since 1953.

Battle Against Tar-Spots

Progress has been made during the past year in the battle against tar-spots, the association was told. Homer M. Roberts, Bama Cotton Mills, Geneva, reviewed the efforts of a special committee named to rid the industry of this cause of contamination of cotton. The number one objective is the elimination of tar-coated pick sacks. Mr. Roberts reported that he talked to Alabama county agents at their annual meeting and, as a result, progress has been made in the handling of cotton when picking, being taken to the gin in transformation to bales.

Unions Losing Grip

The convention was told that the impact of the textile unions on the industry has shown gradual lessening during the past two years by Frank A. Constangy, Atlanta labor consultant. Textile union membership is down, both from inability to obtain new members and from the loss of plants where the union had membership, he said. The organizing drive in the textile industry has made little or no headway in the past year, he said, in spite of heavy expenditure of union money and a vast number of union organizers. He warned of renewed attacks by the union on right-to-work laws and further efforts in Congress for legislation which restricts employers' rights.

These points were further emphasized by L. C. Conger, chairman of the management committee of the Kohler Co., Kohler, Wis. Management in the textile industry has learned to stand its ground, to provide leadership and obtain the co-operation of its workers, he said. It is embarking on

many public relations programs, he said, the most successful being in the employers' own plant.

Cotton Trucking Low

Legislation pending in Congress would, if enacted, make it questionable whether and in what instances the movement of cotton by truck would or would not be subject to rate regulation by the Interstate Commerce Commission, Paul P. Watkins, traffic manager of the Georgia-Alabama Traffic Association, told the convention. Cotton, along with other agricultural commodities, is not subject to rate regulation when shipped by truck, at present, he said. The bill, H. R.-5823, would confine the exemption from rate regulation to movements of agricultural commodities, "from the point of production," and other qualifying requirements, he said. Mr. Watkins pointed out that Southern lines were recently granted a five per cent increase in rates but it was promptly eliminated on movements of textiles and cotton to meet competition.

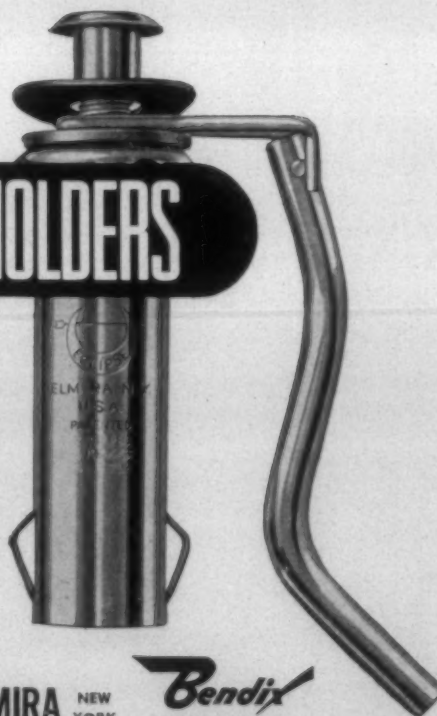
N. C. Textile Foundation Elects Officers

J. Harold Lineberger, president of Piedmont Processing Co., Belmont, N. C., has been re-elected president of the North Carolina Textile Foundation at the foundation's annual meeting held in late March at Gastonia, N. C. J. C. Cowan of Burlington Industries, Greensboro, N. C., has been named vice-president of the foundation. Other officers who have been re-elected are Clyde W. Gordon of Burlington, vice-president; A. Alex Shuford of Shuford Mills, Hickory, N. C., treasurer; and Charles E. Baxter of J. P.

There's only one basic reason for preferring



ECLIPSE BOBBIN HOLDERS



They produce better fabrics at less cost

Actually, of course, there are many reasons for the superiority of Eclipse Bobbin Holders. Easy installation, reduced maintenance requirements (resulting in substantial savings in labor costs), resistance to rust, durability (some holders in operation for more than ten years) and many, many more. Put them all together, though, and they add up to one basic fact: with Eclipse, you get better fabrics at lower cost. And what better reason could

there be for the amazing sales increase Eclipse has enjoyed in the past year. The textile industry has discovered that the use of old-fashioned wooden skewers is inefficient and costly. The modern way to spin yarn is with Eclipse Bobbin Holders. Our increased plant capacity now assures you of prompt delivery. Write or call Eclipse Machine Division today.

ECLIPSE MACHINE DIVISION ELMIRA NEW YORK

Bendix
AVIATION CORPORATION

NOW AVAILABLE
The 1957
Office Edition
of
Clark's Directory
of Southern Textile Mills

Completely Revised

Price \$4.00

(Including Postage if Check
 Accompanies Order)

Clark Publishing Co.

P. O. Box 1225 Charlotte 1, N. C.

Publishers of TEXTILE BULLETIN

Use the Coupon Below to Enter Your Order

Clark Publishing Co
 P. O. Box 1225
 Charlotte 1, N. C.

Send copy(ies) 1957 Office Edition of
Clark's Directory of Southern Textile Mills to:

Name

Position

Firm

Street

City State

Check one:

☐ Bill for cost plus postage.

☐ Check for \$..... enclosed.

Stevens & Co. Inc., Greensboro, N. C., secretary and assistant treasurer. William H. Barnhardt, president of Southern Webbing Mills, Greensboro, and Harold Mercer, general manager of Firestone Textiles, Gastonia, have been added to the 50-member board of directors.

The foundation voted to provide approximately \$65,000 this year toward education and research in the School of Textiles at North Carolina State College. Foundation members decided to continue solicitation of support on the basis of \$1 per employee per year for each member mill.

Luedicke, Pratt To Address N.A.W.M.

Dr. H. E. Luedicke, editor of the New York *Journal of Commerce*, and Francis DeW. Pratt, president of the American Institute of Men's and Boys' Wear, will be the two principal speakers at the 92nd annual meeting of the National Association of Wool Manufacturers in the Waldorf-Astoria Hotel on May 9.

Martin Concagh, J. P. Stevens & Co. Inc., chairman of the arrangements committee, said Dr. Luedicke, well-known as an economic observer, would speak on trends in the economy at the morning business session of the meeting. Mr. Pratt will speak at the luncheon, sponsored by the N.A.W.M. Collateral Group, according to Henry A. Caesar II, H. A. Caesar & Co., chairman. He will discuss the national campaign of the American Institute which is keyed to the slogan, "Dress Right—You Can't Afford Not To." The institute is supported by mills and other suppliers, clothing manufacturers and retailers.

The annual dinner will wind up the 92nd N.A.W.M. meeting with presentation of the group's Golden Fleece achievement awards a feature of the program.

Special Courses To Be Offered At M.I.T.

Massachusetts Institute of Technology will hold two one-week special Summer courses for members of the textile industry. Scheduled July 29 to August 2 is a program on impact behavior for textile material. Principles of textile manufacturing is the subject for the second program to be held August 5-9. The programs, which are part of the school's Summer session, are to be given by the textile division of the mechanical engineering department and are open to any member of the textile industry.

'Fiber Science' Growing In Importance

"Fiber science" was described as a relatively new but increasingly important branch of learning and research activity by S. Jack Davis, assistant director of research for the Chemstrand Corp. speaking recently to the Cincinnati, Ohio, Section of the American Chemical Society. Fibers as seemingly unrelated as human hair, lumber products, fur, wool, cotton and nylon are just samples of the vast range of fibers which play a part in our daily lives and "deserve specialized scientific study," he said.

In the clothing industry alone, he pointed out, latest available figures show that \$4,500,000,000 worth of man-made and natural fibers were converted in one year to \$24,500,000,000 worth of clothing. The real beginnings of today's fiber science, Mr. Davis said, began with the work of Count de Chardonnet in 1891 resulting in today's vast rayon industry and the development by Dr. W. H. Carothers and his co-workers of nylon, first of the true man-made fibers.

"It is not our purpose," he said, "to suggest that the development of fiber science has been the exclusive result of the development of synthetic fibers. On the contrary many of the developments in synthetic fibers were suggested by the accumulated knowledge of natural fibers." Chemists, physicists, engineers and even geneticists use their specialized knowledge and interests in devising new fibers and making better use of existing ones. Because of this, Mr. Davis stressed, "effective work with fibers cannot easily be done within the framework of a single scientific discipline." The great majority of fibers—both natural and man-made—he pointed out, are composed of organic high polymers. "Nature, of course, was the first polymer manufacturer and is still the largest."

Discussing the variety of man-made fibers available today, Mr. Davis reminded his listeners that "nature did not confine herself to one or two. She uses the same polymer to produce linen, cotton and wood fiber. She uses different copolymers to produce wool and silk by different spinning means."

The function of the fiber scientists, Mr. Davis said, is to "study the properties of fibers, to alter them if necessary to achieve certain desired results, and to place selected fibers in end uses where their performance will be optimum."

Describing some of the aims and problems of those working with fibers, the speaker dwelt at length upon the question of dyeing man-made fibers. A particular problem was faced in the dyeing of nylon, he said, and the Chemstrand-developed Chem-nyle Process announced last year "met enthusiastic reception."

The fiber scientist, Mr. Davis summed up, studies fiber properties. "In one instance he discovers outstanding resilience. This prompts him to use the fiber in carpets where it belongs. In another, he discovers outstanding strength and energy absorption; this leads to its use in tires. In another instance he discovers a poor dyeing quality; he goes to work on the synthesized polymer and works through the fiber producing process to achieve a comprehensively dyeable fiber."

University Of Florida Gets Chemstrand Display

An attractive educational display highlighting the roles of engineers in the chemical fiber industry has been presented to the University of Florida by the Chemstrand Corp. The permanent display, located in the University's engineering and industries building, is the first such display to be presented by Chemstrand to any educational institution.

The display uses flow diagrams and photographs to illustrate the manufacture of Chemstrand's two major products, Acrilan acrylic fiber and nylon, and describes the roles engineers play in such operations.

Dr. F. S. Riordan Jr., intermediate area technical superintendent at Chemstrand's Pensacola, Fla., nylon plant, presented the display in ceremonies at the University April 11. Dr. Riordan termed it "another example of co-operation between education and industry in building a stronger tomorrow. We hope," he said, "that such displays will help encourage young men and women to take the technical and scientific courses which will prepare them for interesting

ONLY BORNE HAS IT!

Identification
on All Synthetics—Blends

Plus FUGITIVITY
UNMATCHED
ON NYLON & WOOL!

The Amazing New

SOLUTINTS

SOLUTINTS are a series of fugitive tints that provide identification, lubrication, and improved processing of all natural and synthetic fibres. In addition to giving *maximum tinctorial strength* — SOLUTINTS combine controlled moisture retention with *improved scourability*.

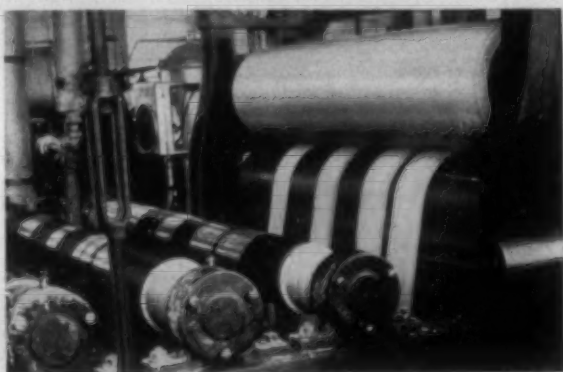


Contact

BORNE CHEMICAL COMPANY, INC.

82 Years of Textile Know-How

Formerly BORNE, SCRYMSER COMPANY
Elizabeth, N. J. • Charlotte, N. C.



Finish with a Profit—with MANHATTAN Rubber Covered Rolls

You improve finishing operations and reduce production costs when you specify Manhattan Rubber Covered Rolls. Manhattan developments in roll cover compounds eliminate major causes of textile roll failure and costly machine downtime, prevent rolls from cracking, hardening or corrugating. An exclusive Manhattan feature is the inseparable bond of rubber to metal core. You get the permanent, uniform and correct density you demand for long, steady production runs. Precision roll grinding and vulcanizing facilities control accuracy of dimension within .002". You get uninterrupted, high-speed production . . . longer, trouble-free roll service . . . under all working conditions.

RM 727C

RUBBER LINED TANKS, PIPE AND FITTINGS
RUBBER AND ASBESTOS PRODUCTS



RAYBESTOS-MANHATTAN, INC.

Textile Roll Covering Plants at
N. CHARLESTON, S. C. PASSAIC, N. J.

a dependable source
of supply for . . .

Industrial Textiles such as:

TIRE FABRICS • HOSE AND BELT DUCKS
CHAFERS • LAUNDRY TEXTILES
SEWING TWINES • CORDAGE • YARNS
COATING FABRICS • SHEETINGS

other available facilities:

BLEACHING
DYEING
FINISHING
SEWING

we solicit your inquiries



Thomaston Mills

THOMASTON, GEORGIA
NEW YORK OFFICE: 40 WORTH STREET

posts in engineering and allied fields. There is today a critical shortage of engineers and this area offers great possibilities to those who prepare for it."

Scholarships Still Available At N. C. State

The North Carolina State College School of Textiles has announced that applications for scholarships may still be submitted by students who plan to enter the college in the Fall of 1957. The Leon Lowenstein Foundation of New York City offers two four-year scholarships, each in the amount of \$500 a year. The Albany Felt Co. of Albany, N. Y., has established a \$500-a-year scholarship, which may be renewed from year to year through a four-year course. Applicants may write the Financial Aid Office, 206 Holladay Hall, North Carolina State College, Raleigh.

C.M.A.G. Convention—May 1-3

Georgia's Lt.-Gov. S. Ernest Vandiver and Dr. Rufus C. Harris, president of Tulane University, New Orleans, will deliver principal addresses at the 57th annual meeting of the Cotton Manufacturers Association of Georgia, May 1-3, at the Emerald Beach Hotel, Nassau, the Bahamas.

Dr. Harris will address the convention delegates and their guests at the first business session on Thursday morning, May 2, following the presidential message by Henry McD. Tichenor, the president of Walton Cotton Mills Co., Monroe, Ga. Mr. Vandiver's speech is scheduled for the closing session on Friday morning.

Attendance for the three-day meeting is expected to be 375 Georgia textile mill executives, representatives of supplier firms, wives and guests. The convention's first activity will be a meeting of the resolution's committee on Wednesday afternoon, May 1. Robert Train, president of Bibb Mfg. Co., Macon, is chairman of this committee.

At the Thursday morning business session, John P. Baum, Milledgeville, vice-president of the Textile Education Foundation Inc., and a vice-president of J. P. Stevens & Co., will make a special report on the foundation's activities in a program to encourage high school graduates to study textile engineering at Georgia Tech.

The convention's annual golf tournament will be played at the Bahamas Country Club on Thursday afternoon, May 2, following a special golfers luncheon. C. Russell Gill, Southern Sizing Co., East Point; Hugh K. Smith, Watson & Desmond, West Point; and Herb L. Norton, the Du Pont Co., Atlanta, will be in charge of the tournament.

A fishing contest, supervised by Mr. Norton, will extend through Thursday and Friday, with prizes awarded on a strict weight basis. On Thursday evening, the Georgia Power Co. will entertain convention delegates at a reception. A "horse-racing" entertainment feature will follow the dinner hour.

The Friday morning business session will be devoted to reports on the activities of the association and its various committees, the election of new officers and directors and the address by Lieutenant-Governor Vandiver. Card tournaments Friday afternoon and an informal dinner Friday night will round out the convention schedule. At the dinner, prizes for the golf and other contest winners will be awarded, to be followed by a floor show. President Tichenor will act as master of ceremonies at the dinner. William

D. Ellis, Southern Mills Inc., Atlanta, chairman of the convention committee, will award prizes.

Pan American World Airways will provide a series of special flights direct from Atlanta to Nassau and return for most of the convention delegates, leaving Atlanta on April 30 and May 1 and returning May 4 and May 5. Other members of the association will go by ship from Miami to Nassau.

T.O.E.G. To Meet Saturday, April 27

The Textile Operating Executives of Georgia will hold their annual Spring Meeting Saturday morning, April 27 in the Harrison Hightower Building on the Georgia Tech campus in Atlanta. The discussion meeting, scheduled to get under way at 9:00 a.m., will cover opening, picking, carding, spinning, spooling and warping.

Shortening Of Credit Hailed By Factor

Recent announcements by Amerotron Corp. and Deering, Milliken & Co. that they are shortening selling terms on synthetic fabrics from 60 to 30 days was hailed as a "brave move" that will improve the profit situation in the synthetic fabric industry at both mill and converter level by Emanuel P. Lewis, executive vice-president of James Talcott Inc. The factoring company executive also noted that previously, under the 60-day terms, it was often necessary for the converter to sell huge quantities of greige and finished merchandise at little or no profit in order to meet obligations. This, he said, created an unstable market. Amerotron shortened its terms April 1. The Deering, Milliken announcement came ten days later. It is expected that other major textile companies will follow suit, according to industry spokesmen. The 60-day selling term for synthetics has been in effect for approximately four years.

In addition to the selling term change, the Amerotron announcement contained a reaffirmation of a balanced production policy. To stabilize production, Amerotron is limiting operation of all its greige goods weaving mills to a five-day, 120-hour week for the balance of 1957. Amerotron pledges that under no condition will it operate these mills during 1957 in excess of this five-day limit.

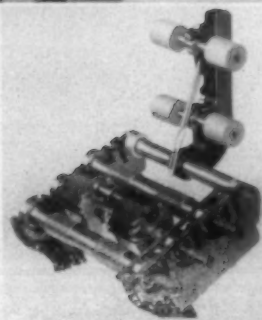
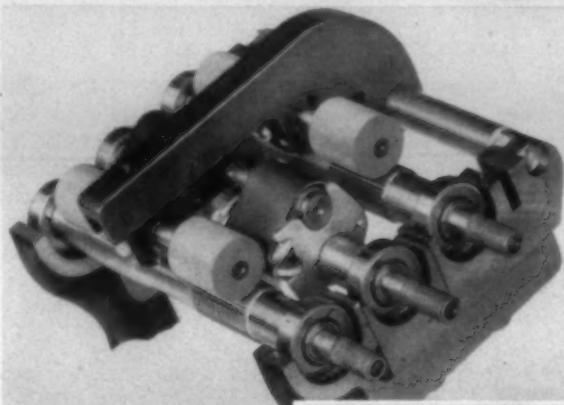
The 2,200-loom Safie Mfg. Co., Rockingham, N. C., has also announced that it is going on a five-day schedule. The Pelzer, S. C., plant of the Kendall Co. has cut back from a six-day to a five-day week, in a move resulting from present unsatisfactory market conditions, it is reported.

Among other mills which have reduced their running schedules, but have not made known their running time, are: Pacolet Mfg. Co., Pacolet Mills, S. C., and New Holland, Ga.; Abney Mills, Greenwood, S. C.; Erwin Mills, Durham, N. C.; Clinton and Lydia Cotton Mills, Clinton, S. C.; Liberty, S. C., plant of Woodside Mills, Greenville, S. C.; cotton mills controlled by Ely & Walker Dry Goods Co., St. Louis, Mo.; mills of the M. Lowenstein & Sons chain; Berkshire-Hathaway Inc.; and others, according to reports.

Reasonable Solutions For Water Problems

Reasonable and practical solutions to water conservation and stream pollution were urged by J. C. Cowan Jr., vice-chairman of Burlington Industries, in an address April 1 before the Sixth Southern Municipal and Industrial Waste

DOES YOUR ANTI-FRICTION SPINNING HAVE THESE EXCLUSIVE FEATURES? **nyaf**



New, proven **nyaf**® out-produces any anti-friction spinning yet developed! Swing saddle center suspension, full anti-friction top and bottom spinning roll assembly... drafts of 10 to 60!

Here is anti-friction spinning operating at its very peak of efficiency—without parallel in bringing new economy, new dependability, and new ruggedness to your spinning. And **nyaf**® can be adapted to any manufacturer's frame.

Roller Stand 30°, 45°, or 60°. Straight line from trumpet to thread guide. Sealed ball bearing fluted rolls. Runout not to exceed .003". All diameters .0015". No more lubrication problems and worn roller necks. All head end gearing anti-friction with silent chain drive. Cylinders and idlers anti-friction.

Does your anti-friction have these **nyaf® exclusive features?** Center-suspension, with rugged center support. Induction hardened rolls, with ball bearings lubricated and double sealed for life. Positive dead weight. Front and middle rolls, with back rolls spring weighted. Front and back rolls easily dismounted for cleaning and buffing. No end play in center support. Fine adjustment of cradle to 5/1000". Cannot get out of line. One adjustment, versus 12 as on old type frame. Rugged construction takes care of effective weighting up to 120 lbs. and over if necessary, at any roll speed desired. Assembly and erecting time one-half that of conventional methods. No oil, therefore less lint. Cleanest operating assembly available anywhere. Precision-engineered for perfect roll alignment at all times with fluted drafting rolls.

*Patents pending.

F. A. YOUNG

GASTONIA



MACHINE CO.

NORTH CAROLINA

**FLUTED ROLLS FOR SPINNING • FLYER FRAMES
COMBERS • DRAWING & LAP MACHINES • NYAF**

Conference, meeting in Raleigh, N. C. Mr. Cowan said that stream pollution has been part of the cost of changing the South from an agricultural to an industrial economy, and suggested that the value of industry to states and communities be weighed in determining realistic waste treatment measures.

"What is a new industry worth to a community?" Mr. Cowan asked. "What is the value of an existing plant to a municipality, county or state? At what point will rising costs, additional taxes and the other costs of staying in business become so stifling that expansion or even continuing operations will not be worth the effort?"

Acknowledging the co-operative efforts of states, municipalities and industries in seeking ways and means to lessen stream pollution, Mr. Cowan noted that improvement has been and will continue to be made. But, he added, each community and each plant has its own particular problem, and blanket rules or rigid approaches could result in over-treatment in some instances and under-treatment in others. "We must take the long look rather than following any short-sighted policy that could conceivably hamstring textiles and other industries," he said.

The answer to problems caused by municipal and industrial waste, Mr. Cowan stated, "lies in our joint and continuing efforts to reach a realistic and practical point of balance. If new industry is to be considered desirable, and if present industry is to expand and prosper, the solution to stream pollution must be the result of compromise. We cannot have our cake and eat it. Through research, new developments and scientific advances will carry us closer to mutually satisfactory arrangements. Patience goes hand in hand with progress."

Colorimeter Demonstration Given

A textile wastes session at the Sixth Southern Municipal and Industrial Waste Conference, held recently at the

School of Textiles, North Carolina State College, witnessed a demonstration of a new stream colorimeter. The device is used for measuring color of liquids with due respect given to the turbidity of the liquid. Jack Coss, N. C. State graduate student, worked on the development of the instrument and gave the demonstration.

Mr. Coss said that when using transmitted light in available methods, the turbidity present in the samples altered the transmitted color but not the color quality. Since turbidity affects the reflected color, he explained, the method used to measure color must include the effects of turbidity. For example, red turbidity in blue solution reflects a green color, he said. This required measurement can be accomplished by a simple rearrangement of the configuration of the illuminant, sample and photocell of the standard filter-photometer.

The new device measures the light that is reflected from within the liquid sample and the color measured has been altered by reflections from the turbid particles as well as the soluble colored solution, Mr. Coss explained. The instrument, which can be operated by battery on the bank of a stream as well as in the laboratory, can also determine the color of a clear liquid, he declared, with the aid of properly selected filters.

By using the stream colorimeter, Mr. Coss said, it may be possible to prepare stream color standards for every stream within a given group, such as coastal, Piedmont and mountain streams. One standard can be used for all the streams in each region. Once the color characteristics of a particular stream are established, a plant operator can predict the degree of color reduction, if any, necessary to make the plant effluent acceptable in the stream. An operator can mix a small sample of the effluent and stream in proportions that would exist if the effluent were dumped into the stream and measure the degree of pollution with the stream colorimeter.

American Viscose Announces College Program

Ninety-three educational institutions will benefit next year from the college aid program of American Viscose Corp. In announcing the plans for 1957-58 academic year, Henry H. Bitler, vice-president, indicated that the schools will benefit by means of fellowships, scholarships, grants-in-aid and assistance through educational foundations.

Twenty fellowships for graduate work, ranging from \$1,500 to \$3,000, have been established in the fields of chemistry, chemical engineering, pulp and paper technology and accounting. Twenty-one scholarships, valued at \$500 each, have been awarded to undergraduates who are majoring in textiles, chemistry, physics, engineering and business administration. Ten grants-in-aid have been established to cover textile research, industrial medical research and food technology.

Institutions which have been invited to take part in the program include Clemson Agricultural College, Georgia Institute of Technology, North Carolina State College, Philadelphia Textile Institute and Princeton Textile Research Institute.

Smother, Softer Cotton Fabrics Sought

Research aimed at developing cotton fabrics with added luster and smoothness has been initiated recently under a contract between the U. S. Department of Agriculture's



Smith, Kirkman, Phillips, Mays

EASTERN CAROLINA S.T.A. OFFICIALS—Worth Kirkman of Pilot Mills Co., Raleigh, N. C., has been elected chairman of the Eastern Carolina Division of the Southern Textile Association. Mr. Kirkman succeeds W. A. Rhinehardt of Golden Belt Mfg. Co., Durham. Others elected include William E. Smith, Hadley Peoples Mfg. Co., Siler City, N. C., vice-chairman; C. Al Phillips, Edenton (N. C.) Cotton Mills, secretary; and Gilbert Mays, Erwin Mills Inc., Durham, N. C., member of the executive committee. Also named to the executive committee was Marion Ellison, Eno Plant, Cone Mills Corp., Hillsboro, N. C. The election was held at the Spring Meeting of the division April 6 at the School of Textiles, North Carolina State College.

Southern Utilization Research and Development Division, New Orleans, La., and the North Carolina State College School of Textiles at Raleigh. The research project is part of U.S.D.A.'s broad program to expand use of cotton through development of new and better cotton products. New cotton fabrics that are smooth, soft and lustrous, without being stiff, should be more suitable than present cottons for a number of purposes. They could be used, for example, in linings, undergarments and soft street dresses.

Researchers hope to find an inexpensive, commercially practical process to produce the desired type of cotton. In the course of their work, cotton fabrics will be impregnated with thermosetting and thermoplastic resins, chemical modifiers and swelling agents. These chemical treatments will be combined with mechanical treatments. Tests are planned to evaluate the ability of treated fabrics to withstand such normal wet-processing operations as bleaching, dyeing and laundering. Fabrics will also be tested for frictional properties, draping quality, breaking strength and tear and soil resistances. Project leader at North Carolina State College will be Prof. Henry A. Rutherford. W. Norbert Berard will supervise the work for the Southern Utilization Research and Development Division.

Dun & Bradstreet Survey Optimistic

Executives expecting an increase over a year ago in their third-quarter sales were more than five times as numerous as those expecting a decrease, according to the latest Dun & Bradstreet survey of business men's expectations.

Manufacturers of nondurable goods expected their third-quarter sales to surpass a year ago more frequently than did the other business men. They were also somewhat more optimistic, profit-wise, than the others. It was the consensus among more than half (54 per cent) that their third-quarter profits would be as high as a year ago, while 36 per cent looked for an increase and ten per cent were apprehensive of a decline.

Although the majority foresaw no change in their third-quarter selling prices as compared with a year ago, those expecting an increase were more than ten times as numerous as those expecting a reduction. Wholesale prices at the time of the survey averaged about two per cent above the level in the third quarter of 1957.

Stability in inventories was implied by 60 per cent of the executives who expected no change from last year in their inventories in the third quarter of 1957. While more expected that their stocks would be larger than a year ago than thought they would be smaller, this may not call for much change from current levels, since business inventories in the early months of 1957 were running slightly higher than in the third quarter of 1956.

The maintenance of high employment levels in the third quarter of 1957 seemed assured with 86 per cent of the business men expecting to need at least as many employees as in the record third quarter of 1956, and ten per cent expecting to increase the number of people on their payrolls.

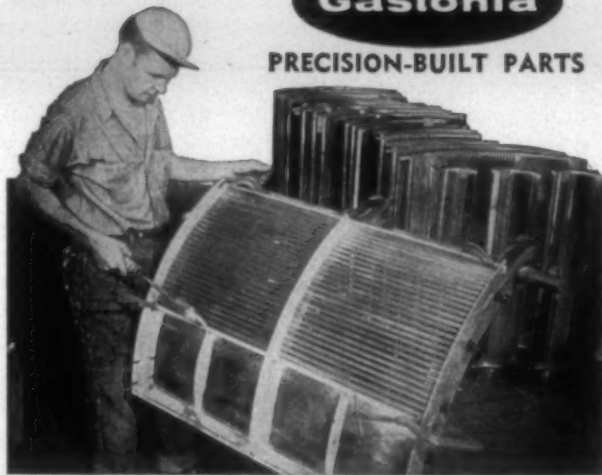
Industrywide Promotion 'A Must'

An industrywide campaign for the promotion of textiles is "inevitable," according to Frank H. Leslie, president of Leslie & Co. and the Clinchfield Mfg. Co., Marion, N. C. In speaking before the Charlotte Textile Club, meeting in mid-April, Mr. Leslie compared the decline in expenditures

For EFFICIENCY and DURABILITY

Gastonia

PRECISION-BUILT PARTS



Get **BETTER OPERATION**

and **LONGER SERVICE** with

Gastonia

Card Screens

GASTONIA standard type rib or perforated Card Screens are cut and assembled on specially designed precision-built jigs.

Maximum operating efficiency and utmost durability of these Card Screens is assured by thorough checks at various stages of manufacture. Scientific final inspection guarantees setting points within standard tolerance.

GASTONIA Card Screens, like all other GASTONIA Products, are precision-built from the finest materials by highly skilled workmen having many years of practical experience.

Gastonia

TEXTILE SHEET METAL
WORKS, INC.

Gastonia, North Carolina

A sheet metal works serving textile mills

CYLINDERS

Dynamically balanced for better performance—reduce vibration to an absolute minimum.

SCREENS

Picker, Condenser and Waste Machine Screens of maximum strength and durability.

ASPIRATORS

Precision manufacturing methods assure proper shape and balance of Aspirators and Aspirator Dampers.

LAP CONDUCTOR TINS

WASTE CHUTE COVERS

WASTE CHUTES

SLIVER PANS

BACK TINS

COMBER RENEEDLING

Top Combs, Half Laps and Winder Guide Combs precision-manufactured from top quality materials to manufacturer's standard specifications. Imported English needles of tempered high-tensile steel used exclusively.

for soft goods to gains in expenditures for food, saying that the clothing industries now are spending only 0.3 per cent of their income on promotion whereas the food industries are spending 3.1 per cent.

Mr. Leslie also cited efforts of the carpet industry which has increased production from 66.7 million square yards in 1951 to 114 million square yards in 1956. The carpet industry, Mr. Leslie said, has approved a budget of \$1.25 million for promotions this year. The future of the textile industry lies somewhere between the machine-minded manufacturer and the style-minded converter. The creative and promotional efforts of the industry have not been sufficient to meet the competition of the hard goods lines in the battle for the consumer's dollar. This points the way for an industrywide campaign matching in money, initiative and imagination the promotions of the hard goods and food industries.

The next meeting of the club will be held on May 13 and will feature as guest speaker Robert T. Stevens, president of J. P. Stevens & Co. Inc., New York City.

Market Research Conference May 28-29

The first market research conference on textiles, being sponsored by the National Cotton Council, will be held in New York City on May 28 and 29, and not in Washington, D. C., as previously announced. "Interest among top textile executives has become so widespread that it was decided to move the meeting to New York to enable a larger number of the textile leaders to participate," Frank McCord, the

council's research director, said. The two-day session will be held at the Statler Hotel.

Mr. McCord reports that plans for the conference are rapidly taking shape and that the program is expected to point up: (1) that potentials for expanding textile consumption exist; (2) that available market research techniques can be employed to expand textile usage; and (3) that the real challenge to the U. S. textile industry is to find ways and means of using these techniques and methods in the most effective way. In addition to prominent speakers from the textile trade and allied interest groups, the program will feature speakers from other industries which have successfully used market research in building consumer markets for their products.

A.A.T.C.C. Activities

Present and potential uses for "radiochemical techniques in the textile wet-processing industry" will be investigated by the American Association of Textile Chemists & Colorists in a new research study which will begin soon under the direction of the association's Piedmont Section. The A.A.T.C.C. governing council approved the new study at a meeting March 29 in the Roanoke Hotel, Roanoke, Va., on recommendation of the A.A.T.C.C. executive committee on research.

The council appropriated \$2,000 toward the cost of the radiochemical investigation, and this will be added to \$500 which has been set aside by the Piedmont Section for the same purpose. The subject of radioactivity in the textile industry occupied the spotlight at the three-day meetings in Roanoke. Dr. Irving A. Bernstein, head of the chemistry department, Tracerlab Inc., Waltham, Mass., analyzed the present applications of radioactivity in the textile field. He discussed the nature of a radioactivity, laboratory investigation with tracer techniques, testing and effects of atomic radiation on fibers and polymers.

Chairman of the research session was Charles A. Sylvester of the technical laboratories, the Du Pont Co., and chairman of the A.A.T.C.C. technical committee on research. The new investigation will be carried out under the direction of Dr. Luther B. Arnold Jr., president, Vikon Chemical Co., Elon College, N. C., chairman of the Piedmont Section's research committee.

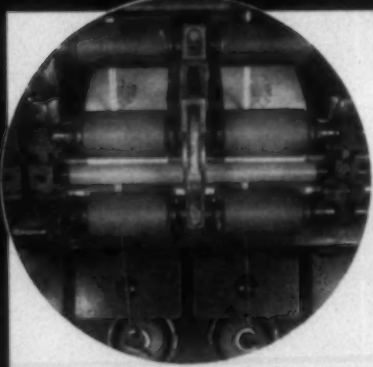
* * * * *

To Publish Brochure—An initial publication order of 50,000 copies of a folder on *Careers in Textile Chemistry*, plus 5,000 copies of a more extensive brochure covering the subject, has also been authorized by the A.A.T.C.C. council. The council appropriated \$2,500 to the association's textile education committee for the purpose of composing and producing these two pieces. Henry A. Rutherford, director of chemical research in the School of Textiles at North Carolina State College, Raleigh, and chairman of the A.A.T.C.C. textile education committee, will direct development of the folder brochure. The new literature was authorized at the Roanoke meeting of the council.

At this same meeting, Ernest R. Kaswell, associate research director, Fabric Research Laboratories, Dedham, Mass., A.A.T.C.C. vice-president from the New England region, and 1957 convention chairman, reported on details of the annual convention scheduled for Nov. 14, 15 and 16 in the Statler Hotel, Boston, Mass. A special feature of the convention, Mr. Kaswell said, will be visits to the A.A.

KENTEX

TEXTILE APRONS



- Custom-Built
- Precision Gauged
- Finest Bark or Chrome Tanned Calfskin Leather
- Absolute Uniformity

● Send us your inquiries for Textile Aprons for all types of long draft spinning and card room machinery. We are world's largest exclusive producer of leather aprons, satisfactorily serving the textile industry for 25 years. Every apron unconditionally guaranteed. Write us for free samples, sending your size.

TEXTILE APRON COMPANY

East Point, Georgia

Hugh Williams & Company
Toronto, Canada



PRECISION BUILT

T.C.C. headquarters offices and laboratory at Lowell (Mass.) Technological Institute. Special trips will be conducted for members attending the convention, and a trip to Lowell will be included as part of the ladies program. At the dyeing and finishing exhibition to be held in conjunction with the convention, Mr. Kaswell said, it is planned to have a display showing the work of the several textile colleges. An exhibit by the archives committee of A.A.T.C.C. is also planned.

Frederick V. Traut, superintendent of processing, Globe Dye Works, Philadelphia, national convention committee chairman, reported that dates for the 1961 convention in Buffalo, N. Y., had been selected. The meetings will be held Thursday, Friday and Saturday, Sept. 28, 29 and 30.

The Book of Proceedings of the Perkin Centennial, containing the text of all the papers presented, is expected to be published by the middle of June, Raymond W. Jacoby, retired chairman of the Perkin Centennial Committee, reported.

Cotton Council Seeking Labeling Legislation

The National Cotton Council has told a Congressional subcommittee that legislation is badly needed to require labeling which would disclose the true fiber content of textile products. Testifying before the Commerce and Finance Subcommittee of the House Interstate and Foreign Commerce Committee, J. Banks Young, Washington representative for the council, said that cotton farmers lose prestige for their products when consumers are dissatisfied with blended fabrics containing rayon but which they believe to be all cotton. "The raw cotton industry is simply asking that its products be protected by requiring that the true fiber content be disclosed," he told the group.

Mr. Young pointed out that it is almost impossible for a layman to detect the presence of a small percentage of synthetic staple fiber in a new fabric which is principally cotton. Sometimes blends of cotton and low-cost rayon fibers are sold to consumers who assume that fabrics or garments are all cotton. This is unfair to the consumer, he said, since the blends will not launder or wear as well as an all-cotton product. Unless the fabric or garment contains a label showing fiber content, he insisted, there is no way for a consumer to be sure he is getting what he wants.

The council spokesman said a bill introduced by Representative Frank Smith of Mississippi embodies most of the principle offering farmers and consumers this protection. He said, further, that provisions of the Smith bill are reasonable and practical from the standpoint of considering trade practices. The bill also calls for advertising that would not mislead the consumer of textile products.

New Fibers From Tree Bark And Needles

Two chemists working in the field of silvichemistry reported early this month the discovery of a new synthetic fiber based on the conversion of waste liquors from chemical cellulose production. Dr. Louis H. Bock and James K. Anderson of Rayonier Inc., chemical cellulose producer, told a meeting of the American Chemical Society at Miami, Fla., of their investigations into the complex realm of lignins, an essential wood component, that yielded new polyester fibers "somewhat similar to those currently being marketed."

Their report revealed that useful synthetic fibers could



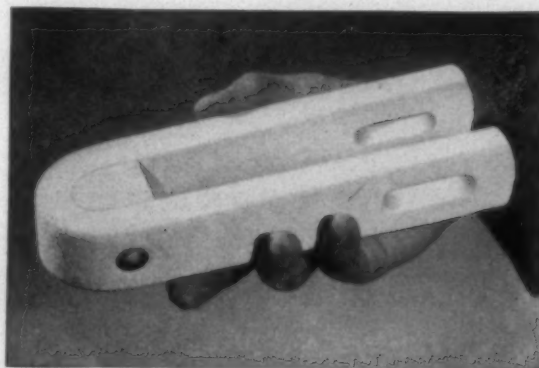
Are outworn RINGS a drag on your production?

The dollars invested in your spinning and twisting machinery can only pay you back through the traveler-ring bottleneck. For top speeds and good running work, let new DIAMOND FINISH rings smooth the way.

WHITINSVILLE (MASS.)
SPINNING DIAMOND RING CO.
Makers of Spinning and FINISH Twister Rings since 1873

Rep. for the Carolinas & Va.: W. K. SHIRLEY, 25 Oak St., Belmont, N. C.
 Rep. for Ala., Ga., & Tenn.:
 P. C. EVERETT, 369 Meadowbrook Drive, N.E., Atlanta, Georgia

HARRIS HEAVY DUTY LUG STRAPS AND HOLD UPS



All Canvas Lug Straps and Lug Strap Hold Ups are made of the best quality materials we can buy, put together with the best workmanship. Lug Straps are available with or without plugs in 1" increments from 8 to 18 inch lengths and in 1½ and 2 inch widths. Partial or full leather lining available to suit requirements. Lug Strap Hold Ups available in all standard sizes in either canvas, leather or hairon leather.

RICE DOBBY CHAIN COMPANY MILLBURY, MASSACHUSETTS

Southern Representatives

R. E. L. Holt, Jr. Associates, Inc.

P. O. Drawer 1319

1910 Wendover Avenue

Greensboro, N. C.

be obtained from lignin sources usually sloughed off in cellulose and paper pulp production or retained only to fire a mill's boilers. Thus new conservation gains might be expected as higher utilization of the entire tree becomes a possibility.

The scientists reported that the new polyester fibers are based upon vanillin converted to protocatechuic acid which also is obtainable from both the bark and the needles of the Western hemlock. Dr. Bock said that the new fibers revealed tensile strengths as high as 4.4 grams per denier and high melting points of 419° F., and they also displayed good dyeing properties and very low water absorption. He added that these new polyesters, as yet unnamed and still possessing some "bugs," may be considered to be in a stage of development similar to nylon's in the mid-1930s.

Vanillin, the first component in creating the fibers, comes from lignin wastes of chemical cellulose production. In cellulose production such as Rayonier's, one pound of lignin becomes available for each two pounds of cellulose—the basic raw material for over 500 consumer end-products; among them—rayon, acetate, cellophane, tire cord, film, sponges, several leading plastics. Thus a tremendous source of low-cost, replenishable chemical raw material is on tap, as Rayonier alone has a total lignin capacity approaching some one billion pounds a year at its eight plants in the U.S.A. and Canada . . . lignin for about 65,000,000 pounds of the new fiber a year. Rayonier as a basic raw material producer has no interest in producing the fiber, but might consider marketing the protocatechuic acid. Dr. Bock declared that if the fiber can be perfected, the world's textile industry might then have access to another continuous and easily replenishable source of low-cost raw material.

Textile Leaders To Glamorize Industry

For the first time in the history of the textile industry, alumni of all textile schools met recently in an effort to take steps to glamorize the industry. Two hundred and fifty industry leaders met in New York, at the first dinner meeting of the Joint Textile Alumni Association. Among textile executives attending were Robert T. Stevens, president of J. P. Stevens & Co. Inc.; Herman Liebmann, president of A. Steinam Co. Inc.; Brackett Parsons, president of Pepperell Mfg. Co.; and Jack Schwab, president of United Merchants & Mfrs. They agreed that the textile industry does not address itself to those young people who seek color, glamour, adventure and excitement.

In the major address of the meeting, Herman Liebmann, chairman of the Lowell Technological Institute New York Alumni and co-chairman of the dinner, said: "There is only one reason which can account for our so-termed lack of glamour. We have a wonderful item to offer to the people of the U. S., but we have never packaged it right." Mr. Liebmann went on to suggest a four-point program for the industry that would make it far more attractive to the young people it hopes to draw into its ranks. The points raised by Mr. Liebmann are: (1) industrial leaders should devote several days a year to talking about the textile business to students of leading schools and universities; (2) more articles and books about the industry should appear, with a prize awarded for the most illuminating one; (3) educational motion pictures should be made depicting the latest developments of the industry and should be offered for free exhibition in high schools; and (4) a per-

manent Joint Textile Alumni Association should be formed within a framework that would allow for regular meetings and the dissemination of material concerning the textile industry.

Mr. Liebmann went on to point out that such a program would not only attract new blood to the industry, but it would also give the millions of people employed in the industry a greater sense of pride in their work.

Standard Test Cottons Announced

Standard test cottons for merchants and spinning mills throughout the U. S. and Europe, marking a milestone in better understanding in world cotton trade, will be made available in a new program announced recently by its sponsors.

A special committee, called the International Cotton Calibration Standards Committee, representing the American Cotton Manufacturers Institute, the American Cotton Shippers Association, the International Federation of Cotton and Allied Textile Industries, the National Cotton Council and the U. S. Department of Agriculture developed the international program. A committee spokesman said that more than a thousand laboratories throughout the world are expected to use the standard cottons for calibrating cotton fiber instruments.

The increasing use of scientific instruments to measure cotton fiber properties by both mills and merchants necessitated the calibration cottons. These standard cotton samples enable testers to "zero in" their instruments. In other words, when fiber instruments in Memphis, Manchester and Frankfurt get the same results on the standard sample, they are more likely to be "on the beam" in their commercial testing.

The new effort toward better understanding in cotton trade is called the International Cotton Calibration Standards Program. The blending, preparation and distribution of the samples will be carried out by the Cotton Division, Agricultural Marketing Service, of the U. S. Department of Agriculture. The testing and certification of the standard cottons will be the responsibility of the five sponsoring organizations and their designated laboratories.

In the initial action under the program, the International Committee reported, cotton calibration standards will consist of three samples having high, medium and low readings in the Micronaire test for fineness, and the Pressley test for strength. Later on, additional fiber property tests may be included in the program.

Two representatives of each sponsoring organization serve as a special committee of the American Society for Testing Materials to supervise the program. Standard test methods of the A.S.T.M. will be used to establish the calibration cotton readings. When standard test procedures of the International Organization for Standardization (I.S.O.) become available, they will be used as the official test methods in the calibration standards program.

Three laboratories in the U. S. and two in Europe will establish the official readings on the calibration cotton standards. U. S. laboratories include the Department of Agriculture, the U. S. Testing Co. in Dallas, Tex. (appointed by the American Cotton Shippers Association), and the laboratory of the American Cotton Manufacturers Institute in Clemson, S. C. The International Federation has designated the Shirley Institute in Manchester, England,

and the Bremen Cotton Exchange in Bremen, Germany, as its representative laboratories.

Representing A.C.M.I. on the special committee is John Wigginton of that organization's staff and W. R. Marsden of the Bibb Mfg. Co., Macon, Ga. Other members include Dr. Earl E. Berkeley of Anderson, Clayton & Co., and Otto Goedecke of Otto Goedecke Inc., representing the American Cotton Shippers Association; Dr. John W. Wright and E. J. Overby, representing U.S.D.A.; E. Lord of the Shirley Institute and Fritz Hadwich of the Bremen Cotton Exchange, representing the International Federation of Cotton and Allied Textile Industries; and George S. Buck Jr. and Vernon Moore, representing the National Cotton Council.

Cotton Research And Promotion Urged

"With truly adequate and hard-hitting programs of research and promotion, cotton can reign as 'King' of fibers for a long, long time. If, on the other hand, we don't substantially close the gap that exists between our research and promotion efforts and those of the synthetics, cotton inevitably faces a decline in its position," George G. Chance, Bryan, Tex., president of the National Cotton Council, declared in an address to the recent annual convention of the Texas Cotton Ginners Association.

With the right kind of program, he said, cotton's markets can be shoved upward to the point where the problem of growing and ginning enough to supply the demand would be claiming the attention of the industry. "It is entirely possible," he said, "that within five years' time our normal domestic market could be up to 11 million bales and our exports up to nine million, with a total of 20 million and pointed on upward. This is the kind of market to which we can look forward if we really put research and promotion to work for us."

Realizing a meaningful expansion of markets is far from simple, the council president pointed out, noting that the results of the kind of program he envisioned would not be immediate. "It will take years to bring them about," he said, "but the sooner we start, the sooner we will realize the benefits."

March Rayon And Acetate Shipments

Shipments of rayon and acetate by U. S. producers totaled 92,500,000 pounds in March, a slight increase over the 92,200,000 pounds shipped in the previous month, but nine per cent less than shipments in the corresponding month of 1956, according to the *Textile Organon*, statistical bulletin of the Textile Economics Bureau Inc.

March shipments included 89,900,000 pounds to domestic consumers and 2,600,000 pounds for export. By individual product, shipments of high tenacity rayon yarn in March were 8½ per cent above the previous month, while regular+intermediate tenacity rayon yarn showed a gain of four per cent and rayon staple+tow was up two per cent. On the other hand, acetate filament yarn shipments in March were 19½ per cent below the February level, and acetate staple+tow deliveries were off seven per cent.

Shipments of rayon and acetate in the first quarter of 1957 totaled 295,100,000 pounds, 8½ per cent below the 323,300,000 pounds that were shipped in the first quarter

ASK FOR THIS
FOLDER...

PQ SODIUM SILICATES
IN TEXTILE
WET PROCESSING



It tells you how PQ Silicates help to produce these results in wet processing, e.g.:

PEROXIDE BLEACHING.....saves peroxide
SCOURING.....cleaner fabrics
SOAPING OFF PRINTS.....whiter whites, brighter colors
RAW WATER COAGULATION...clearer, sparkling water
WASTE WATER TREATMENT...water may be reused or returned to stream

CORROSION CONTROL.....protects metals; stops red water water lines; air conditioning units

Let's consult with you about your silicate and detergent needs.



PHILADELPHIA QUARTZ COMPANY
1170 Public Ledger Bldg., Philadelphia 6, Pa.

PQ SOLUBLE SILICATES • METSO DETERGENTS

COOL ANSWERS TO HOT PROBLEMS

BEN-TEX TEXTILE GREASES

SLO-VIS TEXTILE OILS

BEN-LUBE TEXTILE GREASES

HEAT RESISTANT

PHOENIX OIL COMPANY
AUGUSTA, GEORGIA
MANUFACTURERS OF TEXTILE LUBRICANTS

SCOTT TESTERS, INC.
Main office, Providence, R. I.

Rep. for Ga., N.C., S.C., JOHN KLINCK
304 West Forest Ave., N. Augusta, S. C.

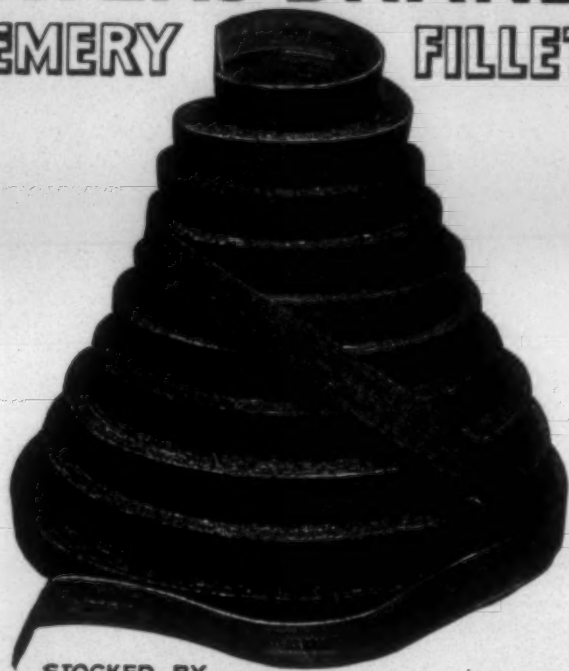
S.E. Service (and Sales in Ala., Ky., Tenn., Va.)
SCOTT TESTERS (SOUTHERN), INC.
P. O. Box 834, Spartanburg, S. C.

TESTERS

SCOTT

Read TEXTILE BULLETIN Want Ads

DRONSFIELD'S PATENT ATLAS BRAND EMERY FILLET



STOCKED BY
THE PRINCIPAL MILL SUPPLY HOUSES
AND CARD MAKERS



BURKART-SCHIER CHEMICAL CO.
CHATTANOOGA, TENNESSEE

MANUFACTURING CHEMISTS FOR THE TEXTILE INDUSTRY

TELEPHONE 5-0371

WORKS N. MARIETTA ST.

**BARKLEY
MACHINE WORKS**
MANUFACTURERS OF
TEXTILE MACHINERY
PARTS

GASTONIA,

NORTH CAROLINA

of 1956. Domestic shipments in the first quarter at 286,500,000 pounds were off ten per cent from January-March 1956, while export shipments at 8,600,000 pounds showed a gain of 65 per cent. The *Organon* notes that producers' stock of rayon and acetate on March 31 was 112,200,000 pounds, 25 per cent above the 89,600,000 pounds held at the end of the first quarter of 1956.

An analysis by the *Organon* of exports of man-made fibers and manufactures reveals that the value of these exports in 1956 totaled \$237,119,000, a figure four per cent above the 1955 valuation of \$227,967,000. The declared value of exports last year was the highest on record except for 1947 when the value was \$307,717,000. By comparison, the value of exports in pre-war 1939 amounted to \$15,828,000 or only 6½ per cent of the 1956 total. The export figures above do not include shipments to U. S. territories or possessions, the principal one of which is Puerto Rico.

Total U. S. exports of man-made fibers and their products in 1956 amounted to the equivalent of 209,900,000 pounds, a figure 11½ per cent above the 188,500,000 pounds computed for 1955. These data include the estimated rayon content of tires exported but do not include the export of rags, clips and similar items.

Imports of man-made fibers and manufactures in 1956 came to a total of 105,100,000 pounds in 1956; the net export balance, therefore, was 104,800,000 pounds. In 1955, on the other hand, the export balance amounted to only 4,000,000 pounds due to the extremely large imports of foreign rayon staple. The chief import item in the last several years has been rayon staple, while the main export items have been yarn and especially the fabricated items of cloth and apparel.

Exports of regular+intermediate tenacity rayon and acetate filament yarns amounted to 4,637,000 pounds last year, a decline of 17 per cent compared with 1955. However, exports of high tenacity rayon filament yarns and tire components (yarn, tire cord and fabric and fuel cell fabric) at 20,081,000 pounds were 30 per cent above the 1955 total of 15,468,000 pounds. Similarly, exports of non-cellulosic filament yarns last year at 11,941,000 pounds were 20½ per cent greater than the 1955 total of 9,917,000 pounds. Large poundage and percentage gains were made in the exports of nylon and other yarns.

Exports of man-made staple, tow, tops and similar items amounted to 24,502,000 pounds, or nearly double the amount exported in 1955; this increase of 12,156,000 pounds was composed of a 7,772,000-pound gain in rayon and acetate staple exports and a 4,384,000-pound rise in exports of non-cellulosic staple. Exports of all man-made fiber waste, noils, etc., at 27,095,000 pounds were 36½ per cent over the 1955 level.

The *Organon* points out that broad woven piece goods exports in 1956 amounted to 192,741,000 square yards, three per cent below the 198,882,000 yards exported in 1955. The largest decline from 1955 occurred in the cate-

J. N. PEASE & COMPANY

Industrial Engineers

199½ E. FIFTH ST.

CHARLOTTE, N. C.

gory "other 100 per cent or chiefly filament yarn fabrics of rayon & acetate" where exports declined by 6,982,000 yards or ten per cent to the 1956 level of 62,748,000 yards, marking a continuation of the decline begun in 1954.

Exports of "other broad woven man-made fiber fabrics" continued to increase steadily, rising from only 5,551,000 yards as recently as 1952 to 63,188,000 yards in 1956; the 1956 figure was 3,352,000 yards or $5\frac{1}{2}$ per cent greater than the 1955 total. This category includes fabrics wholly or chiefly by weight of man-made fibers other than rayon or acetate.

In a detailed presentation of the exports of man-made fibers and products by country of destination, the *Organon* shows that the North American countries, notably Canada, Cuba and Mexico, were the major purchasers. These nations absorbed $37\frac{1}{2}$ per cent of the poundage of cellulosic yarns, tire cord and tire cord fabrics and $42\frac{1}{2}$ per cent of all man-made fiber broad woven fabrics exported last year. Moreover, Canada, including Newfoundland, continued as the largest single outlet for man-made fiber broad woven fabrics. The South American countries were the second ranking purchasers of cellulosic yarn and tire cord and fabrics, the largest buyers being Colombia, Peru and Venezuela.

United States imports of man-made fibers and manufactures during 1956, according to the *Organon*, were valued at \$47,729,000, 27 per cent below the all-time high of \$65,369,000 reached in 1955. The most important factor in the import decline was the lower imports of rayon staple, which were \$21,825,000 lower, while for all other items combined there was a net increase of \$4,185,000. The 1956 imports of rayon staple were 91,882,000 pounds, $46\frac{1}{2}$ per cent below the record 171,943,000 pounds imported in 1955, but still the second largest yearly import total on record.

Imports of man-made fiber fabrics in 1956 totaled 3,087,000 pounds, 59 per cent above the 1955 total. Italy was the largest single supplier with 1,079,000 pounds or 40 per cent of the total, followed by Japan with 675,000 pounds or 25 per cent and West Germany with 605,000 pounds or $22\frac{1}{2}$ per cent. Imports of apparel and other manufactures last year were valued at \$13,531,000 an increase of 26 per cent over 1955. The principal increase took place in embroidered apparel which comes mainly from Japan and the Philippine Republic.

In the *Organon* tabulation of selected man-made fiber imports the data reveal that of a 1956 total of \$15,383,000, Japan supplied \$6,647,000 or 42 per cent. In 1955, the total value of these imported items was \$11,395,000 of which Japan supplied \$5,928,000 or 52 per cent. Of the products shown, the 1956 participation by Japanese suppliers ranged from a low of $20\frac{1}{2}$ per cent of the value of woven piece goods to a high of $63\frac{1}{2}$ per cent of the value of handkerchiefs and woven mufflers. There was

J. W. Valentine Co., Inc. Selling Agents

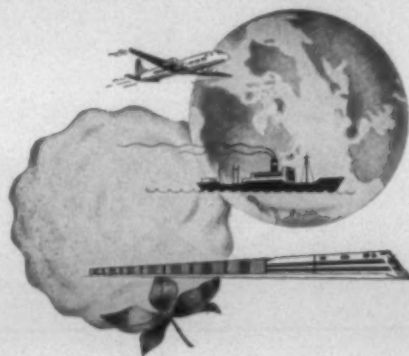
1430 Broadway New York, N. Y.

Southern Representative

T. HOLT HAYWOOD

Clemmons, North Carolina

Winston-Salem 8414



All the World's a Market for Textiles

In every corner of the globe there's a market for American textiles. Through years of experience, our resident representatives have acquired invaluable knowledge in presenting the products of American Mills.

Combined with full coverage of the American textile market, this broad service affords important distribution for the American Mills we are privileged to serve.

Joshua L. Baily & Co., Inc.

40 WORTH STREET, NEW YORK 13, N. Y.

Leaves air mint fresh!



the multi-purpose
industrial disinfectant
with the fresh mint leaf aroma

MINTOL disinfectant has a coefficient of 9. Diluted half a cup to the pail of water, it meets the new Use Dilution Confirmatory Test.

SANITIZES THE SURFACE
KILLS BACTERIA DEODORIZES

For free sanitary survey
of your premises ask
your Dolge service man



NOW IN
WEAR-RESISTING
NYLON



1 2 3

Shift-marker SPINNING TAPES

AVAILABLE IN 3 WIDTHS: 1/2", 5/8", 3/4"

Industry-famous TIGER-TUF Shift-marker Spinning Tapes are now available in long wearing NYLON. These tapes provide the same controlled quality you get with Tiger-Tuf cotton tapes. Coleman supplies bonding strips and bonding machines for joining these new NYLON tapes. Write for details.

COLEMAN COMPANY, INC.
GREENVILLE, SOUTH CAROLINA

FRANK G. NORTH INCORPORATED MANUFACTURING CHEMISTS

Atlanta, Ga. • P. O. Box 123, Ste. A • Phone Plaza 3-2196
Marietta, Ga. • P. O. Box 92 • Phone Marietta 9-4323

The Nation's largest manufacturer of Sizing Compounds,
Gums, Waxes, and other kindred products for all warp yarns.

**INDUSTRIAL
ENGINEERS**
*Specializing
in Textiles
since 1914*

MODERNIZATION PROGRAMS
PLANT LAYOUTS
MANAGEMENT PROBLEMS
WORK LOAD STUDIES
COST REDUCTION REPORTS
COST SYSTEMS
SPECIAL REPORTS

RALPH E. LOPER CO.
GREENVILLE, S. C. FALL RIVER, MASS.
Dial 2-3868 Dial OSborne 6-8261

a substantial increase in the import value of embroidered apparel of man-made fibers from 1955 to 1956 but the Japanese share of the total declined from 88½ per cent to 55½ per cent over the period.

34,531 Bales Cotton Used Daily In March

Average consumption of cotton per working day in March totaled 34,531 bales, which is under the year earlier level of 36,647 bales and slightly higher than the February 1957 average of 34,218 bales, the Census Bureau reported in mid-April. The seasonally adjusted daily average cotton consumption index for March was 97 against 103 in March 1956, and 94 in February this year. The total consumption of cotton in March was 690,627 bales which is sharply under the year earlier level of 916,176 bales but higher than the February level of 684,366 bales. Bales of cotton in public storage and compresses at the end of March amounted to 13,099,426 compared with 15,464,616 held at the end of March 1956, and 14,051,133 bales held March 2, 1957.

According to the Census Bureau the daily average consumption of synthetic staple by mills with cotton system spindles amounted to 1,712,000 pounds in March while the poundage for the same month last year amounted to 1,695,000 and 1,778,000 pounds for February of this year. Stocks of synthetic staple held by mills with cotton system spinning at the end of March amounted to 49,173,000 pounds compared to 56,763,000 pounds held at the end of March 1956, and their March 2 total was 50,352,000 pounds, the Census Bureau reported.

February Wool Consumption And Stocks

The weekly average rate of fiber consumption on the woolen and worsted systems in February was five per cent above the January rate and 11 per cent below that of February 1956. The weekly average raw wool consumption during February was 8,780 thousand pounds (scoured basis) or six per cent above the January level, and ten per cent below that of February 1956. While the rate of consumption of carpet class wool increased eight per cent compared to the previous month, it was five per cent below the February 1956 level. Consumption of apparel class wool was five per cent above the January level and 12 per cent below that of February of last year. Consumption of fibers other than raw wool averaged 5,394 thousand pounds per week, or three per cent above the January average and 12 per cent below February 1956.

World Cotton Use Up 500,000 Bales

The International Cotton Advisory Committee reports that world cotton consumption in the present season would probably reach 29 million bales—a new record representing an increase of 500,000 bales over last year. U. S. consumption will be off about a half-million bales but this loss is offset by an increase of about one million bales in foreign use. Total Free World exports this season may increase to 13.9 million bales, with an increase to 7.5 million bales by the U. S. being offset by a drop of between six and 6.5 million bales from the 9.3 million last season for all other countries, according to I.C.A.C. figures. In relation to reduced availabilities, the I.C.A.C. said, the trade situation is far from discouraging.



But why MEN over 45?

Our doctors still don't know *why*, but if you are a man over 45 you are six times as likely to develop lung cancer as a man of your age twenty years ago. They *do* know, however, that their chances of saving your life could be about *ten times* greater if they could only detect cancer long before you yourself notice any symptom. (Only 1 in every 20 lung cancers is being cured today, largely because most cases progress too far before detected.)

That's why we urge that you make a habit of having your chest X-rayed every six months, no matter how well you may *feel*. The alarming increase of lung cancer in men over 45 more than justifies such precautions. Far too many men die *needlessly!*

Our new film "The Warning Shadow" will tell you what every man should know about lung cancer. To find where and when you can see his film, and to get life-saving facts about other forms of cancer, phone the American Cancer Society office nearest you or simply write to "Cancer"—in care of your local Post Office.

**American
Cancer
Society**



CLASSIFIED ADVERTISING

PRIVATE PERSONNEL SERVICE

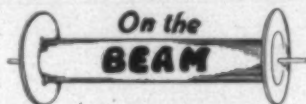
A professional-confidential service to companies and qualified mill personnel. Many positions available now with leading companies. Send resume and photo. No fee to be paid unless you accept position through our office.

PROFESSIONAL CONFIDENTIAL

Contact: J. ARTHUR WHITEHEAD

Private Personnel Service

916 Wilder Building Charlotte, N. C.



Loom and Warper
Beams—Shell Rolls
Special Wood Rolls

TURNER & CHAPMAN

Box 620

Griffin, Ga.

Box 135

Phone 495

R. D. GASAWAY

Textile Machinery

Specializing in Weaving Machinery
and Supplies

CORNELIA, GEORGIA

BOBBINS — BOBBINS — BOBBINS

1,400,000 8" Quills—Mostly Draper. Fit
Whitin Medium Spindle

16,000 5" x 8" Double Head Twister Bobbins

10,000 5" x 9" Fibre Head Twister Bobbins

Many Other Sizes

CHARLES G. STOVER COMPANY

West Point, Ga.

We Buy — We Trade — We Sell

Textile Machinery and Supplies

**SOUTHERN MILL SUPPLY
COMPANY**

P. O. Box 83

Athens, Ga.

Phone: Liberty 6-6553

POSITIONS OPEN

WE CAN PLACE—throwing supt.;
OVERSEER for quilling and twisting,
knit goods cutting, knit goods finish-
ing, garnetting, picking, stitching room,
tricot knitting, lace finishing; boss knit-
ters.

Production and quality control engi-
neers; chemists; time study industrial
engineers; print works colorist; loom
fixers; garnet salesman. SEND US
YOUR RESUME in confidence.

Charles P. Raymond Service, Inc.

Phone: Liberty 2-6547

294 Washington St.

Boston 8, Mass.

Over 55 Years in Business

A. Benson (Ben) Davis

Textile Machinery, Manufacturers
Agent

Appraisals and Liquidations
(Sales Agent for Economy Baler
Co.)

P. O. Box 11,112 Phone ED 3-6661

Charlotte 9, N. C.

EXECUTIVE WANTED

Executive who can do scheduling and plan-
ning of production of Novelty Yarns and
Fancy Fabrics on Dobby looms in small
mill in Concord, N. C. Address reply to
Box "X," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

ASSISTANT PLANT ENGINEER

Assistant plant engineer who knows main-
tenance, steam boilers and machine shop
operations. Age under 35. Location Pied-
mont North Carolina. Give summary of ed-
ucation and experience. Reply to
Box "E. H. S.," care Textile Bulletin
P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED AS GENERAL OVERSEER
OR PLANT SUPERINTENDENT. Yarn, twine or
weaving mill. Practical experience on all phases
of yarns and twine manufacturing, including tube
twists and tufting yarns. Sober, dependable,
alert, energetic, and in good health. Presently
employed. Reply to Box "E. L. K.," care Textile
Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED AS SUPERINTENDENT of
yarn mill. Experienced in carded and combed.
I. C. S. graduate. Available May 1st. References
on request. Reply to Box "S. M. H.," care Tex-
tile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

HAVE YOU MOVED?

If you put off notifying us of your
change in address it is possible that
you will miss two copies of TEX-
TILE BULLETIN.

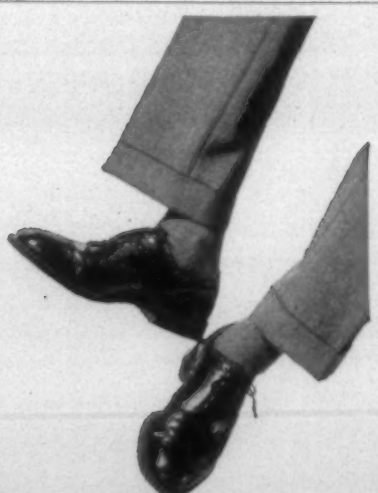
Use the form below to tell us when
you move or plan to move.

Please PRINT address on envelope
as TEXTILE BULLETIN has been
reaching you.

Now give us the new address

Circulation Department
TEXTILE BULLETIN
P. O. Box 1225
Charlotte 1, No. Car.

Index to Advertisers

-A-		-D-		New England Bobbin & Shuttle Co. —	
Adolf, Emil —	—	Dary Ring Traveler Co. —	—	N. Y. & N. J. Lubricant Co. —	42
Aldrich Machine Works —	33	Davis, A. Benson (Ben) —	119	Noble, Roy —	118
Allen Son's Co. Div., Wm. (O. G. Kelley & Co.) —	100	Davis & Furber Machine Co. —	—	North, Inc., Frank G. —	—
American Aniline Products, Inc. —	—	Dayton Rubber Co., The —	12, 13, 90 and 91	-O-	
American Moistening Co. —	24	Dillard Paper Co. —	53	Oakite Products, Inc. —	—
American Schlafhorst & Co. —	—	Dixon Corp. —	59	Orr Felt & Blanket Co., The —	—
American Viscose Corp. —	—	Dodenhoff Co., Inc., W. D. —	—	-P-	
Anheuser-Busch, Inc. (Corn Products Div.) —	—	Dodge Mfg. Corp. —	—	Pabst Brewing Co. —	—
Antara Chemicals Div. of General Dyestuff Co. —	35	Dolge Co., The C. B. —	117	Parks-Cramer Co. —	21
Armstrong Cork Co. —	74 and 75	Draper Corp. —	2	Pease & Co., J. N. —	116
Ashworth Bros., Inc. —	—	Dronsfeld Bros. —	98 and 116	Penick & Ford, Ltd., Inc. —	—
Atlanta Belting Co. —	60	Du Pont de Nemours & Co., E. I. —	—	Perkins & Son, Inc., B. F. —	—
-B-		Dyestuffs Division —	—	Philadelphia Quartz Co. —	115
Bahnson Co., The —	—	-E-		Phoenix Oil Co. —	115
Bally & Co., Inc., Joshua L. —	117	Engineering Sales Co. —	—	Pilot Life Insurance Co. —	—
Baker Mfg. Co. —	41	-F-		Pneumadl Corp. —	41
Barber-Colman Co. —	—	Fairtex Corp. —	29	Proctor Chemical Co. —	—
Barco Mfg. Co. —	—	Ferguson Gear Co. —	94	Proctor & Schwartz, Inc. —	49
Barkley Machine Works —	116	Foster Machine Co. —	43	-R-	
Barrell Co., Wm. L. —	8	-G-		Radiator Specialty Co. —	—
Bendix Aviation Corp. (Eclipse Mch. Div.) —	106	Gasaway Textile Mch., R. D. —	119	Raybestos-Manhattan, Inc. —	—
Best & Co., Inc., Edward H. —	—	Gaston County Dyeing Machine Co. —	36	General Asbestos & Rubber Div. —	108
Bond Co., Charles —	—	Gastonia Textile Sheet Metal Works, Inc. —	111	Raymond Service, Inc., Chas. P. —	119
Borden Co., The (Chemical Div.) —	—	General Asbestos Rubber Div. of Raybestos-Manhattan, Inc. —	108	Red-Ray Mfg. Co., Inc. —	—
Borne Chemical Co., Inc. —	107	General Dyestuff Co. —	—	Reiner, Inc., Robert —	—
Boulligny Co., The (Div. R. H. Boulligny) —	7	Georgia-Carolina Oil Co. —	—	Rice Dobby Chain Co. —	113
Branson Co. (Fairtex Corp.) —	29	Gessner Co., David —	—	Riggs & Lombard, Inc. —	—
Bullard Clark Co., The —	40	Gilman Paint & Varnish Co. —	93	Roberts Co. —	31
Burkart-Schier Chemical Co. —	116	Gossett Machine Works —	19	Rose Co., Bennett —	—
-C-		Gossett-Mason, Inc. —	—	Rohm & Haas Co. (Textile Div.) —	—
Calgon, Inc. —	—	Greensboro Loom Reed Co. —	—	Roy & Son Co., B. S. —	—
Carolina Loom Reed Co. —	—	Guardian Chemical Co. —	—	-S-	
Carolina Refractories Co. —	—	Gulf Oil Corp. of Pa. —	15, 16, 17 and 18	Saco-Lowell Shops —	26 and 62
Carter Traveler Co. (Div. of A. B. Carter, Inc.) —	—	-H-		Sandoz Chemical Works, Inc. —	85
Charlotte Chemical Laboratories, Inc. —	—	Hagan Chemicals & Controls, Inc. (Calgon Co. Div.) —	—	Scott Testers, Inc. —	115
Chemstrand Corp. —	70 and 71	Hart Products Corp. —	11	Seydel-Woolley & Co. —	—
Ciba Co., Inc. —	47	Hartford Machine Screw Co. —	Front Cover	Sims Metal Works —	103
Clark-Cutler-McDermott Co. —	—	Henley Paper Co. —	61	Sinclair Refining Co. —	25
Clinton Corn Processing Co. —	—	Herr Mfg. Co., Inc. —	55	Solvay Process Div., Allied Chemical & Dye Corp. —	—
Cocker Machine & Foundry Co. —	—	Holyoke Machine Co. —	34 and 96	Sonoco Products Co. —	3
Coleman Co., Inc. —	118	Houghton & Co., E. F. —	—	Southern Engineering Co. —	—
Comer Machinery Co. —	—	Howard Bros. Mfg. Co. —	20	Southern Shuttles Div. (Steel Heddle Mfg. Co.) —	39
Corn Products Sales Co. —	6	Hubinger Co., The —	20	Southern States Equipment Corp. —	—
Courtaulds, Inc. —	—	Huyck & Sons, F. C. —	—	Staley Sales Corp., A. E. —	—
Crompton & Knowles Corp. —	9	-I-		Stover Co., Charles O. —	119
Cronland Warp Roll Co., Inc. —	—	Ideal Industries, Inc. —	22	Steel Heddle Mfg. Co. and Southern Shuttles Div. —	39
Curtis & Marble Machine Co. —	—	Ideal Machine Shops, Inc. —	—	Stein, Hall & Co. (Textile Dept.) —	—
Cutler-Hammer, Inc. —	—	-J-		-T-	
		Jacobs Mfg. Co., The E. H. (Northern and Southern Divisions) —	40	Taylor & Co., R. M. —	—
		-K-		Tennessee Corp. —	45
		Keever Starch Co. —	79	Terrell Machine Co., Inc., The —	—
		-L-		Texas Co., The —	—
		Landis, Inc., Oliver D. —	—	Textile Apron Co. —	112
		Laurel Soap Mfg. Co., Inc. —	—	Textile Hall Corp. —	—
		Livermore Corp., H. F. —	4 and 5	Textile Shops, The —	—
		Livingstone Coating Corp. —	—	Textile Specialty Co. —	—
		Loper Co., Ralph E. —	118	Thomaston Mills —	108
		-M-		Trust Co. of Georgia —	—
		Manhattan Rubber Division —	108	Turner & Chapman —	119
		Manton-Gaulin Mfg. Co., Inc. —	57	-U-	
		Marquette Metal Products Co., The (Curtiss-Wright) —	—	U S Bobbin & Shuttle Co. —	—
		Marshall & Williams Corp. —	—	U. S. Ring Traveler Co. —	—
		McDonough Power Equipment, Inc., Machinery & Foundry Div. —	32	Universal Winding Co. —	—
		Mill Devices Co. (Div. of A. B. Carter, Inc.) —	—	Uster Corp. —	—
		Monsanto Chemical Co. —	—	-V-	
		Monticello Bobbin Co. —	60	Valentine Co., J. W. —	117
		Mount Hope Machinery Co. —	—	Veeder-Root, Inc. —	Back Cover
		-N-		Victor Ring Traveler Co. —	—
		National Aniline Div., Allied Chemical & Dye Corp. —	27	-W-	
		National Ring Traveler Co. —	—	WAK Industries —	—
		National Starch Products, Inc. —	10	Walton & Lonsberry —	90
		National Vulcanized Fibre Co. —	—	Watson & Desmond —	—
		-O-		Watson-Williams Mfg. Co. —	—
		-P-		West Point Foundry & Machine Co. —	—
		-Q-		Westvaco Mineral Products Div. —	25
		-R-		Whitinsville Spinning Ring Co. —	121
		-S-		Whitinsville Spinning Ring Co. —	113
		-T-		Wood's Sons Co., T. B. —	102
		-U-		Wolf & Co., Jacques —	14
		-V-		-Y-	
		-W-		Yeomans Textile Machinery Co. —	—
		-X-		Young Machine Co., F. A. —	109
		-Y-		-Z-	

You know those rare days when everything's right? Air smells good. Food tastes terrific. Even the old face looks good in the mirror. Today can be that kind of day. Just do two things. Call your doctor for a thorough medical checkup for cancer. Then write out a check—a nice fat one—to the American Cancer Society, and mail it to "Cancer" in care of your local Post Office.

AMERICAN CANCER SOCIETY

UP TO 3.5* LBS.

From Sliver to Yarn in One Operation...
with the NEW

WHITIN MONARCH* SPINNING FRAME

Produces large yarn packages and completely eliminates roving



Actual mill installation of Whitin Monarch Spinning Frames

COARSE YARN PRODUCTION

The Whitin Monarch Spinning frame is a new type machine for producing very large packages of knotless coarse yarns, from .5's — 8's (cotton count), directly from sliver. The frame features a massive chassis, the famous Whitin two-apron roving drafting arrangement with top arm suspension and weighting, 7" gauge, up to 5½" rings, 11" traverse. Either floor or ceiling creels can be used.

It is ideally suited to highly economical production of quality tufted carpet and other coarse

yarns from wools, synthetics and blends with fiber lengths from 3" to 9".

- Yarn on bobbin — up to 3.5* lbs.
- Draft range 4 — 50
- Accommodates sliver up to 100*gr./yd.
- Spindle speeds up to 5000+ r.p.m.
- Spinning type cradles
- Quik-Set Ratching for instantaneous change of roll setting
- Pulleys for four spindle drive



Whitin
MACHINE WORKS

WHITINSVILLE • MASS.
CHARLOTTE, N. C. • GREENSBORO, N. C.
ATLANTA, GA.
SPARTANBURG, S. C. • DEXTER, ME.

In these
5 Ways

VEEDER-ROOT CUT METERS Cut Costs...Speed Sales

No two ways about it . . . customers are demanding uniform cut lengths of cloth. And that's exactly why another modern mill just equipped 900 looms with V-R Cut Meters. Here's how the installation paid off . . . 5 ways:

1. **NO CUT MARKS** to be made or removed. No special treatment needed to remove dies in finishing some fabrics.
2. **STYLE-PLANNING MORE ACCURATE** . . . exact length of cuts for any style can be controlled and filling changes can be introduced at proper point to meet style changes.
3. **WEAVERS FORGET CUT MARKS** . . . use the time instead for cloth inspection and loom tending. *For when a cut reaches the predetermined length, the Cut Meter lights a light or actuates the warp stop motion.*
4. **REDUCES SHORT LENGTHS** . . . Cut Meter can be set to "even up" on the lengths of the next few cuts in the event of a smash or other trouble.
5. **INSPECTION SIMPLIFIED** . . . because cuts of cloth on the same styles are of even length. This in turn simplifies finishing and shipping problems.

Customers can be sure they'll get uniform cut lengths from mills equipped with Veeder-Root Cut Meters. And that's why more and more mills are giving their customers this assurance which speeds sales. How about *your* mill? Just get in touch with the nearest Veeder-Root office.



VEEDER-ROOT



"The Name That Counts"

BARTFORD 2, CONNECTICUT • GREENVILLE, S. C.

Chicago 6, Ill. • New York 19, N. Y. • Montreal 2, Canada • Offices and Agents in Principal Cities